

Hank Mishkoff

E.T.

Adventures on Land!



TI / Looking Glass

Hank

5/13/83

an activity learning module

matching, maze tracing, strategy activities

* * *

E.T. & HIS ADVENTURES ON LAND
(Biological Sciences - For Ages 4 to 7)

* * *

OBJECT OF THE GAME

To help E.T.'s spaceship land.
By learning about and helping the animals get to their homes and/or food, sites are cleared to enable E.T.'s spaceship to land.

EDUCATIONAL GOALS

To learn where different animals live and what they eat; their characteristics and facts; their relationship to each other; balance of nature.

SCENARIO

Title Sequence

E.T. is communicating with his spaceship. Elliott is next to him. Spaceship is up in the sky. Ship's lights begin to rotate and Elliott runs off screen right. E.T. lifts his neck and arm. As his fingertip glows, the ship beams a light down to E.T. in response. "PRESS ENTER TO HELP E.T." appears. Action continues until key pressed.

Press ENTER:
Explanation Screen

Closeup of communicator screen monitor with E.T.'s hands holding; reading as if spaceship is sending; on one letter at a time in UPI style with "deet-deet-deet" SFX: "SHIP CAN'T LAND HERE. THERE ARE THREE LANDING PLACES. MAKE THEM SAFE BY GETTING THE ANIMALS TO THEIR FOOD AND HOMES. PRESS ENTER TO GO ON."

Communicator screen has static and stripes as if tuning out and then in again. New message appears on screen:

"THESE SITES ARE SAFE:

- | | |
|-------|--------|
| PRESS | FOR |
| 1 | FOREST |
| 2 | JUNGLE |
| 3 | DESERT |

Transition Screen

Silhouette of E.T. and Elliott on bicycle moving up and across screen right to left in front of big circle moon.

Individual Game Screen Menu

Depending upon which location is chosen, this menu appears:

"PRESS FOR
 LEVEL 1/ACTIVITIES
 1 WHAT FOREST ANIMALS EAT
 2 WHERE FOREST ANIMALS LIVE
 LEVEL 2/GAME
 3 CLEAR THE FOREST!"

Individual Game Screens

#1: What Animals Eat

As a tutorial to the game and/or an activity for the younger ages, this screen allows for simple maze tracing and matching. E.T. brings on one animal at a time and the player, as Elliott, moves the animal to its appropriate food. Only three choices of food are given in a simple, straightforward, graphic format. As the food is correctly matched, a short reward sequence occurs and then the food disappears to be replaced by another choice of food. Animals are "zapped" on by E.T.'s glowing finger in a set of six, randomly chosen from a bank of 12 animals for each location.

Below is a list of animals and food used in this activity:

FOREST

bird - seeds, berries
 frog - insects
 fish - plants, insects
 rabbit - carrot
 owl - mouse
 squirrel - nuts
 beaver - bark
 fox - bird, rabbit, mouse
 bear - meat; berries, fish
 cougar - rabbit
 porcupine - bark
 skunk - insects

JUNGLE

lion - meat (zebra)
 hippo - water plants
 rhino - grass
 crocodile - fish
 parrot - fruit
 elephant - grass, leaves
 zebra - grass
 tiger - meat
 monkey - fruit
 snake - insects, mouse
 giraffe - leaves
 anteater - ants

DESERT

snake - mouse, eggs
 bat - insects
 prairie dog - grass, roots
 turtle - plants
 wild pig - snakes, roots
 lizard - insects
 owl - insects, mouse
 spider (tarantula) - insects
 camel - grass
 kangaroo - plants, bark
 ostrich - fruit, seeds, berries
 hawk - snake, mouse

#2: Where Animals Live

E.T. raises his arm, his finger glows and "poof", an animal appropriate to the location chosen appears. The player moves the animal with the joystick or directional arrows to its home. When the top of the animal's head touches the base of the home, the choice is made. If correct, E.T.'s heartlight glows and a reward tune is played. (If technically possible, the animal will go into the home before disappearing, and a new home choice appears.)

Visuals

Animation on all the animals (36) will be extensive. Each animal has several different positions as it runs, hops, wiggles or waddles to its destination. Detail for clear animal identification will be achieved by overlaying sprites.



February 18, 1983

Project Schedule for TI/SDA "ET" Natural Science Cartridges (3):

Monday,
April 4th
(reflects
2-week delay)

Concepts: Marketing "umbrella" discussed as to:
Target ages and grouping;
Areas of natural science to be explored;
Series and game title suggestions

Game themes explained as to:
Storyline;
Object of the learning game;
Levels and variables within each;
Brief outline of game flow;
Graphic screen concepts on paper

Monday,
May 9th
(make up
one week)

Storyboard: Storyline and graphics/animation
presented covering:
Main game screen with graphic variables
for levels;
Specific educational goals and tasks;
Animation sequences of gameplay;
Possible graphic animation for title
sequences and any in-betweens;
Word screens written and designed.
(but open for change after testing)

Tuesday,
May 31st
(on schedule)

Flow Charts: Programmer specifications final;
Specific game logic;
Human factors problems/solutions;
Any corrections to animation/graphics;
Technical discussions;
Review programming done to date of
game screen graphics & animation

Wednesday,
August 31st

Prototypes: Working versions of all three packages;
Some changes could still be in review;
Rough documentation for three manuals



February 18, 1983

Educational Topic Areas for TI/SDA "ET" Natural Science Cartridges(3):

I. Physical Sciences

- A. Astronomy
- B. Physics
- C. Chemistry

8-13

II. Earth Sciences

- A. Geography
- B. Geology

8-13

III. Biological Sciences

- A. Botany
- B. Ecology
- C. Zoology

4-7

* * * *

Possible Specific Topic Areas Include:

I. Physical Sciences

A. Astronomy

- Universe/origins & nature
- Sun/solar system:
 - Stars
 - Planets
 - Galaxies
 - Moon
 - Comets/meteors
 - Quasars/pulsars/black holes
 - Orbits

- Eclipses
- Lunar/solar calendars
- Telescopes
- Predictions
- Space technology:
 - Spaceships
 - Space probes/satellites
 - Space exploration/travel/habitation/UFO's

B. Physics

- Law of gravity
- Galileo's study of motion/falling bodies
- Theory of relativity
- Atomic theory of matter
- Newton's law of motion
- Theories of light
- Light waves
- Study of color; lenses
- Electricity

- Magnetism
- Theories of heat
- Gases
- Mechanics
- Nuclear interactions
- Electronics
- Radio communications
- Computer science
- Lasers

C. Chemistry

Elements/compounds/chemical reactions
Laboratory discoveries
Radioactivity
Molecular structure

II. Earth Sciences

A. Geography

Topography (map-making)
Maps/reading the earth
Directions
Locations/continents, oceans, cities, rivers, capitals
International Dateline

B. Geology

Formation of the earth
Landforms
Glaciers/lakes/rivers
Rocks/minerals/crystals
Earthquakes/volcanoes
Paleontology/dinosaurs/fossils
Study of atmosphere
Climatology/meteorology
Resource conservation
Oceanography

III. Biological Sciences

A. Botany

Plant evolution
Man's dependence on plants:
for food, oxygen, clothing, shelter, fuel
Types of plants
Parts of plants
Photosynthesis

B. Zoology

| | |
|-----------------------------|--------------------|
| Anatomy/structures | Genetics/heredity |
| Physiology/living processes | Parasites |
| Embryology/development | Behavior in nature |
| Classification | Evolution |

C. Ecology (relation of animals to their environs & each other)

| | |
|-----------------------|-------------------------|
| Balance of nature | Food scarcities |
| Expanding populations | Environmental pollution |

E.T Science Games (3)

Concepts and Overview

- First Game: Ages 4 to 7
Biological Sciences
LAND Plants & Animals: their characteristics and facts;
man's relationship to them, dependence on;
balance of nature
- Second Game: Ages 8 to 13
Earth Sciences
SEA Geology/geography
(venture) Map reading, directions (on water);
weather; oceanography; geology; geography
climatology
- Third Game: Ages 8 to 13
Physical Sciences
Astronomy/
Physics
AIR *1. Balloon (physics)*
2. Earth ship (space tech.)
3. E.T.'s ship (astronomy)
Laws of physics; gravity (in hot air
balloon) to astronomy ... reading of night
sky to space technology (docking)

First Game: (Plants & Animals)

"E.T. in His Adventures on Land" (working title)

For Ages 4 to 7

Scenario Presentation:

1. Title sequence:

E.T. is "communicating" with space ship, Elliott is next to him. Space ship is up in sky (upper right quadrant) with flashing lights. 4-5 secs of E.T. working, then ship's lights begin to rotate... Elliott then runs off screen right. E.T. then lifts neck and raises his hand... his finger tip glows and ship beams a light down to E.T. in response. Lights continue to rotate as "Press Enter to Begin" appears below the horizon line...hold until key press or time out.

2. Explanation screen:

Close-up of E.T. holding "communicator"; reads as if space ship is sending E.T. a message: " Can't land here. 4 possible landing sites. Trust and listen to the plants and animals. Learn from them. They will help you home."

2.

communicator then has stripes and static as new message appears:

"These sites are safe."
Press For
1 Forest
2 Mountain
3 Seashore
4 Desert

3. Transition screen:

Elliott on bike with E.T. in basket going across the big circle moon.
(moves right to left as publicity shot)

4. Game screen with explanation intro or separate intro screen
instructions on game screen or as character of host animal on
separate screen

5. To the complete game screen

Design Structure & Object of the Game

1. Forest: Bird's-eye view
 Obj: To clear a site for the ship to land
2. Mountains: Side view/long shot
 Obj: To get to the top to be picked up by the ship
3. Seashore: Bird's-eye view
 Obj: To spell S.O.S. to be seen and then picked up
4. Desert: Side view/medium shot
 Obj: To get to the oasis on bike to meet ship
 ~~before water evaporates.~~

Forest Game:

Educational Topic: Forest Animals, Their Homes & predators
(friend or foe aspect)

Mountain Game:

Educational Topic: animal parts (and animal homes)

Seashore Game:

Educational Topic:

Desert Game:

Educational Topic:

3.

Visuals Appropriate to Locations:

(besides E.T., Elliott & Bike with basket)

Forest:

- trees
- paths
- animals
- their homes
- pond
- bridge
- Cave

Mountains:

- cave
- vines
- boulders
- ropes
- plants
- animals
- waterfalls
- plateau

Seashore:

- beach
- pier
- trees
- cliffs
- treehouse
- ~~waterfall~~
- creek
- raft
- inlets

Desert:

- Cracks
- Boulders
- Cactus
- Hot sun
- Mesas
- Plateau
- High Cliff

Weather Appropriate to Locations:

- Forest: Temperate & rainy
- Mountains: Cold & dry
- Seashore: Temperate & humid
- Desert: Hot & dry

Animals Appropriate to Locations:

Forest: (Level 1 and Level 2 ~~can take from group 2~~)

(clues + no time limit)

(no clues + time limit)

~~Group 1~~

~~Group 2~~

~~Group 3~~

- Owl (hole in tree)
- Bear (cave)
- Rabbit (hole)
- Fish (pond)
- Bird (tree/nest)

- Squirrel (tree)
- Fox (hole; chases rabbits)
- ~~Otter (water)~~
- Frog (lily pad/pond)
- ~~Skunk~~

- ~~Deer~~
- Chipmunk
- Beaver (~~cut logs~~ / dams)
- ~~Weasel~~
- Raccoon (beside pond - hollow tree stump)

Mountain:

- Bear
- Goat *deer*
- Sheep
- Rams
- Eagle
- Polar bear?
- mountain lion (cougar)

Seashore:

- Crabs
- Fish
- Gulls
- Whales
- Sharks
- Ducks
- Starfish
- Worms

~~Skunk?~~

4.

Desert:

Lizards
Snakes
Spiders
Butterflies
ants
prairie dog

Arcade Game Comparisons:

Forests: Labyrinth Game
(Maze Exploration)
ie: ~~BigDug, Mr. Do, Tutankam~~

Mountains: Cartoon-genre
(Avoid, dodge, catch, jump, climb)
ie: Burger Time, Frogger, Donkey Kong,
Milton Bradley's Big Foot

Seashore: Unique cartoon-genre
(more graphic, unusual tasks)
ie: Q-Bert, Pengo, Qix, Amidar

Desert: Scrolling Shoot-Out Games
(race, jump, maneuver)
ie: Smurf, Pitfall, Barnstorming, River Raid

Forest Game Scenario:

Object:

To get a site cleared in time. Space ship is coming. Can't land unless all the animals are in their homes. Goal: To get the animals to their proper homes by the time the ship comes by maneuvering around obstacles thereby making own maze path and clearing the site.

Strategy: to determine which is the shortest path to the proper home; so that the fastest clearing of the site. making own path but avoiding trees, boulders, pond; utilizing paths (faster) of bridges, or existing path; Therefore... learning animal homes (can't go in unless correct) without "failing" Just takes longer to get to the owl's tree if you went to the fox hole first. Also, each time played is different.

variables: three groups of animals computer choses from; 15 animals in the two levels, only five at once on screen.

problems: how do we solve fact child could accomplish task and fail the time restraint? ok to just go to next site?
how do we insure going to more sites if task done in time?
go back to clue idea to determine which site will be the one?
and the first one is never "it"?

March 14, 1983

TI/Looking Glass E.T. Science Games
Concepts & Overview

FIRST GAME: E.T.
 Adventures on Land

 (Biological Sciences)
 For Ages 4 to 7

SECOND GAME: E.T.
 Adventures at Sea

 (Earth Sciences)
 For Ages 8 to 13

THIRD GAME: E.T.
 Adventures in the Air

 (Physical Sciences)
 For Ages 8 to 13

2. an activity learning mobile
watching/maze tracing activities "LAND"

FIRST GAME

Biological Sciences
For Ages 4 to 7

To help E.T. ship land.

OBJECT OF THE GAME:

To get E.T. home. By listening to and learning from the plants and animals various tasks are accomplished to enable E.T.'s spaceship to land.

EDUCATIONAL GOALS:

To learn about plants and animals; their characteristics and facts; man's relationship to them and dependence on; their relationship to each other; balance of nature.

SCENARIO:

Title
sequence

1. E.T. is communicating with spaceship. Elliott is next to him. Spaceship is up in sky. Ship's lights begin to rotate and Elliott runs off screen right. E.T. lifts his neck and arm. As his finger tip glows, the ship beams a light down to E.T. in response. "Press enter to begin" appears. Action continues until key press.

Explanation
Screen

2. Close-up of communicator screen with E.T.'s hands holding; reads as if spaceship is sending:

"Can't land here. Four possible landing sites. Trust and listen to the plants and animals. Learn from them. They will help you home."

Communicator screen has static and stripes as if tuning out and then in again.

New message on communicator screen:

"These sites are safe."

| | |
|-------|-----------|
| Press | For |
| 1 | Forest |
| 2 | Mountains |
| 3 | Seashore |
| 4 | Desert |

Transition
Screen:

Silhouette of E.T. and Elliott on the bicycle scrolling across screen right to left in front of big circle moon

Individual
Game
Screens:

Forest gameboard
Mountain gameboard
Seashore gameboard

-or-

Desert gameboard

Landing/
Take-off
Sequence:

At end of individual activities, screen flashes colors, SFX and ship coming; when screen is up, medium shot of E.T. and Elliott embracing good-bye; E.T. walking to ship, wave and ship takes off.

INDIVIDUAL
ACTIVITIES:

Forest
Game:

Object: To clear a site for the ship to land by taking the animals to their homes.

Educational
Topic:

Animals and Their Homes

Brief
Description:

The spaceship is coming. It can't land unless all the animals are in their homes. Before the ship comes, player must get all the animals to their proper places by maneuvering around obstacles thereby making own maze path and thus clearing a site.

Graphic
Description:

Bird's-eye view of forest site showing trees, boulders, pond, bridge, animals and their homes scattered around screen. (lily pad on pond, tree hole, nest, cave, hole, etc.)
E.T., Elliott and 5 (Level 1) or 7 (level 2) animals are animate. One animal appears at a time.
Action occurs when E.T. raises his glowing finger and player then moves animal through the greenery to its appropriate home;

an activity learning
module

matching, maze
tracing, strategy
activities

* * *

E.T. & His
Adventures on Land

(Biological Sciences)
For Ages 4 to 7

* * *

OBJECT OF
THE GAME

To help E.T.'s spaceship land.
By learning from and by helping the
plants and animals, various tasks are
accomplished to enable E.T.'s spaceship
to land.

EDUCATIONAL
GOALS

To learn about plants and animals;
their characteristics and facts; man's
relationship to them and dependence on;
their relationship to each other;
balance of nature.

SCENARIO Title
Sequence

E.T. is communicating with spaceship.
Elliott is next to him. Spaceship is
up in the sky. Ship's lights begin to
rotate and Elliott runs off screen right.
E.T. lifts his neck and arm. As his
fingertip glows, the ship beams a light
down to E.T. in response. "PRESS ENTER
TO HELP E.T." appears. Action continues
until key pressed.

Explanation
Screen

Closeup of communicator screen monitor
with E.T.'s hands holding; reading as if
spaceship is sending:

"Can't land here. Three possible landing
sites. Trust and watch the plants and
animals. Learn from them. They will help
you home."

Communicator screen has static and stripes
as if tuning out and then in again. New
message appears on screen:

"These sites are safe:

| Press | For |
|-------|----------|
| 1 | Forest |
| 2 | Mountain |
| 3 | Desert" |

| | |
|----------------------------------|---|
| Transition Screen | Silhouette of E.T. and Elliott on bicycle moving up and over across screen right to left in front of big circle moon. |
| Individual Game Screens | Forest Gameboard Mountain Gameboard Desert Gameboard |
| Landing/ Take-off Sequence | At the end of individual activities, screen flashes colors, SFX of spaceship approaching; when screen is up, medium shot of E.T. & Elliott embracing goodbye; E.T. walking to ship, wave and ship takes off. |

INDIVIDUAL ACTIVITIES

| | |
|----------------------|--|
| FOREST GAME | <u>Object</u> : To get the animals safely to their homes in order for the spaceship to land. |
| Educational Topic | Forest Animals and Their Homes (& Predators) (predators only in Level Two) |
| Brief Description | <p>The spaceship is coming. It can't land unless all the animals are in their homes. Before the ship comes, player must get all the animals to their proper homes by maneuvering through the forest paths.</p> <p>In order to span the age group, Level One is a simple path with only three home choices. Level Two involves more strategy. Not only do we find a more complex gameboard, but player must decide the "best" route to the rabbit hole. He will learn that going by the foxhole (if the fox has already been "delivered" to its home) will only result in the fox chasing the rabbit back to start.</p> <p>There are twelve animals:</p> <ul style="list-style-type: none"> *bird - nest in tree *frog - lily pad in pond *owl - hole in tree *squirrel - hole in tree *rabbit - hole in ground *fish - pond beaver - dam in pond *fox - hole in ground *bear - cave cougar - cave porcupine - hole in ground/hollow log skunk - hollow log <p>*these appear only in Level One. All animals in Level Two.</p> |

Level One will have five new animals (out of a possible 12) before landing sequence. After landing sequence, the menu (on communicator) reappears.

MOUNTAIN GAME

Object: To help E.T. guide Elliott up the mountain path by matching animal closeups to the correct animal, thereby reaching the top to make contact with E.T.'s spaceship.

Educational Topic

Animal Identification

Brief Description

Elliott needs to climb the mountain to make contact with E.T.'s spaceship. By looking through E.T.'s binoculars, player helps E.T. guide him up the path by identifying animal parts with the appropriate animal. An elephant's trunk may appear in the lefthand binocular circle. In slot machine fashion, animals can be scanned in the other binocular circle (by pressing space bar). When correct entry is made (by pressing enter), the path on the mountain is further enhanced as Elliott moves further up the top.

Level One has easier animals and six choices, including four more distractors. Level Two has a greater variety of animals with ten choices, including two extra distractors. Also in Level Two: If player stays in one place too long (by giving incorrect answers), landslides can occur on the mountainside and the path can "slide" back to the previous point.

There are twelve animals (tentatively):

| | |
|------------------|--------------------|
| elephant - trunk | giraffe - neck |
| fish - fin | bird - wing |
| zebra - stripes | bear - claw |
| *eagle - claw | monkey - tail |
| *ram - horn | frog - leg |
| *bat - wing | duck - webbed foot |

*Level Two only.

DESERT GAME

(to be designed)

Object: To manuever E.T. and Elliott through the desert landscape to get to the landing site.

Educational Topic

Biological cycle of plants; their needs and animals' dependence on them.

Just as graphics and animation play an important part in a pre-reader module, music will be more extensive than the other two cartridges for 7-10 year-olds. Also speech will be added, with supportive text on the screen at times. Elliott's voice will give simple instructions such as, "Help the animals to their homes". At the end of a set, E.T. might say, "GOO-O-O-D".

Educational Reinforcement

When an animal first appears in the starting box, text will pop on stating the name of that animal. These single words will reinforce the identity of the animal as a parent goes through cartridge with their child, plus teach the child the animal word.

#3: Game

Clear the Forest! Clear the Jungle!
Clear the Desert!

Pressing #3 on the menu calls up one of these three action games. Each menu will be different depending on the landing site chosen. (Either "Clear the Forest!", "Clear the Jungle!", or "Clear the Desert!". Graphically, each of the three gameboards will also be unique. The difference not only is the differing bank of animals (appropriate to each site), but also the graphics. For example, in the forest game there are tall trees, rocks, ponds, bridges, etc. The jungle might have denser foliage, vines, swamps, etc. The desert might have cactus, sand, rocks, cliffs, an oasis, etc.

Object of the Game

Clear the landing site by getting the animals safely to their homes. Unlike the activity/tutorial section of the cartridge, this action/strategy game is fast-moving. It is the excitement of the cartridge, incorporating what the child has learned by playing the activities of simple matching.

Animals appear one at a time as in the activities. The first animal may encounter an obstacle or two, but his trip home is relatively uneventful compared to the 12th animal, who must outwit his hungry predators, who now come and go on the gameboard. The carnivorous animals get hungry and come out of their homes periodically to stalk and roam the paths. Player must remember where and when he deposited a specific animal before going down a specific path with another animal. The animals who eat plants (herbivores) must be fed before they are tucked into their homes. It may be that the rabbit's carrot pops on in the path on the way to the rabbit hole or it could pop up right outside the fox hole. This game will evolve as it is more playable. Child testing will determine final speed and complexity of task.

The purpose of this game is to generate fun, a review of the information obtained in the activities, the "stretch" needed for a target market as diverse as 3 to 6 year-olds.

Animals & Their
Homes (Used in activity
and in game)

FOREST

bird - nest in tree 1
frog - pond 2
fish - pond
rabbit - hole in ground 3
owl - hole in tree 4
squirrel - hole in tree
beaver - dam in pond 5
fox - hole in ground
bear - cave; hollow log 6
cougar - cave
porcupine - hollow log 7
skunk - hollow log

JUNGLE

lion - grassy plains 8
hippo - shallow water 9
rhino - grassy plains 10
crocodile - river bank 11
parrot - tree
elephant - grassy plains
zebra - grassy plains 12
tiger - grassy plains
monkey - tree; vines 13
snake - tree; vines
giraffe - grassy plains
anteater - grassy plains 14

DESERT

snake - hole in ground; under rocks 15
bat - cave
prairie dog - burrow in ground 16
turtle - burrow in ground
wild pig - plains
lizard - rocks 17
owl - hole in cactus 18
spider (tarantula) - under rocks; burrow 19
camels - plains 20
kangaroo - plains
ostrich - plains
hawks - high tree; mountaintop cliff 21

"Bull's-eye" gameboard with balloon at upper right corner, balloon must land in center circle around dot (rocket). Moving down at a diagonal is a challenge because rockets are coming out every few seconds.

Space
Habitation
Game

Now in the ship, SFX as if taking off, then cuts to next game inside rocket.... E.T. and Elliott must be maneuvered around to survive in the ship in space; principles of weightlessness.... trying to eat, dress, etc.

Screen could be E.T. and Elliott as small figures; player must move around the inside of the ship... into their suits, to work gauges of ship, to control their closed environment for it to be livable. Possibly also to start communicating with E.T. spaceship which is somewhere in space - yet to be found. From list of topic areas:

- Space technology
- Spaceships, probes, satellites
- Space exploration, travel, habitation
- Possibly radio communications, electronics, lasers, etc.

Space Travel
Game

E.T. and Elliott are seen in front of the ship's window - gauges and readout area below. As they travel through space to locate E.T.'s ship, various challenges await them. But some of the primary tasks involve locating the spaceship from far away by reading the night sky (constellations), searching the solar system (planets), being alert to eclipses.

Different data will be available from which to make decisions that will affect the course they take. Each adventure will be different since the "mother ship" is in orbit around a different star in one of the constellations - selected at random by the computer before the game begins.

In E.T.'s travels he must always be expanding his storehouse of knowledge, perhaps in an asteroid belt, he must collect certain types, "[]"'s are used to scan the window area, then "fire" to collect (as a substitute for firing).

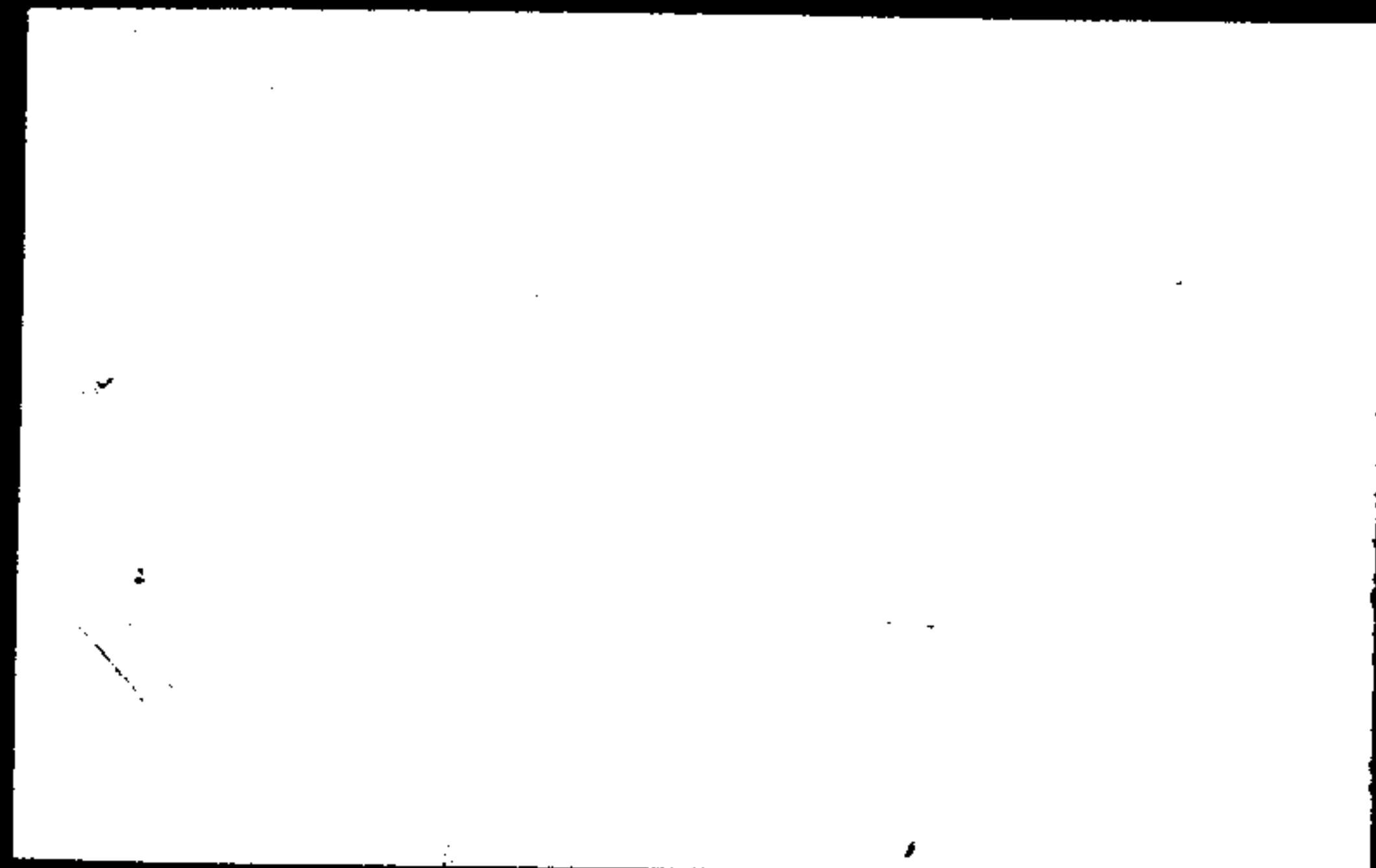
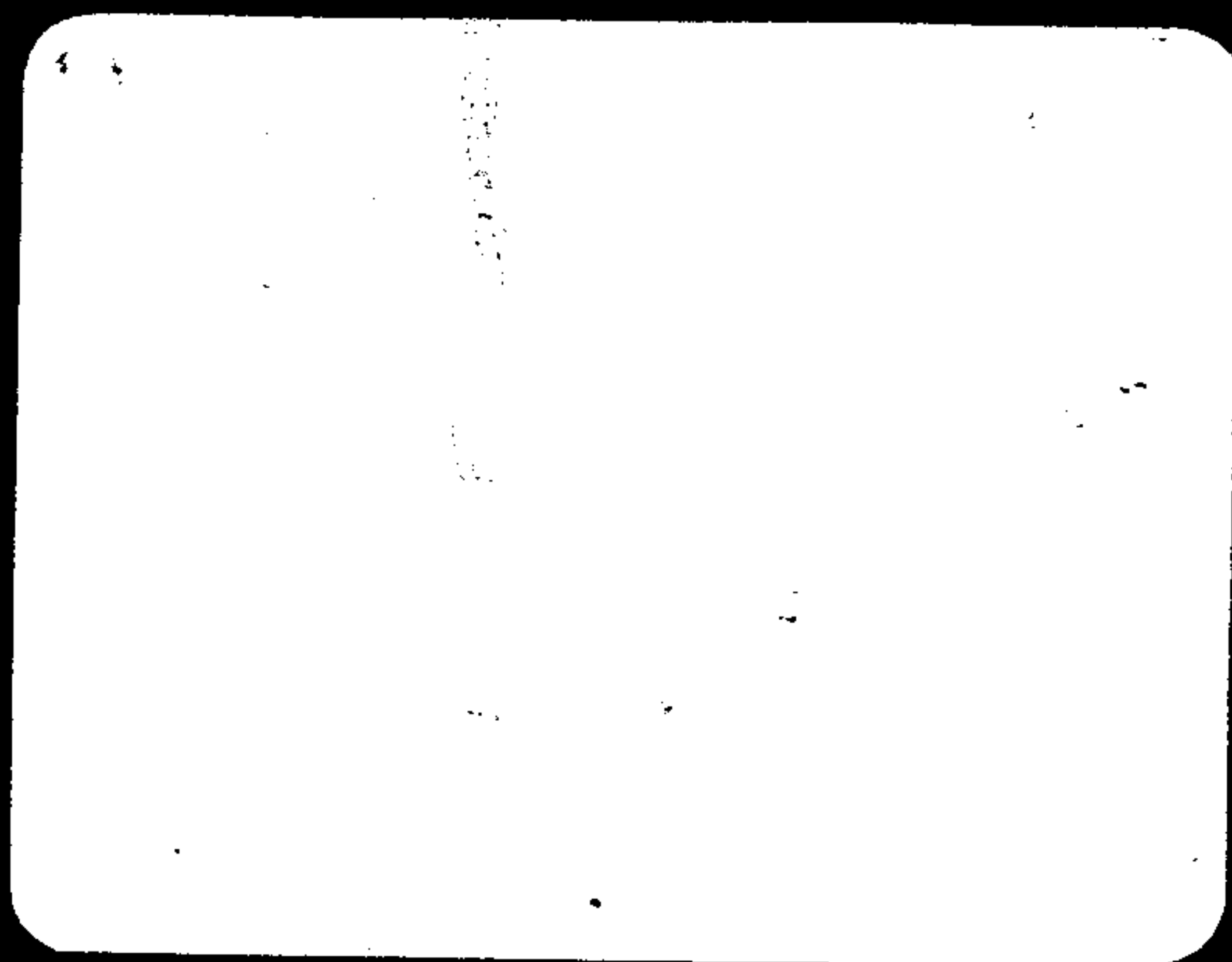
Topics covered (in astronomy):

- Sun/solar system
- Stars, planets
- Galaxies, moon, comets, meteors
- Quasars, pulsars, black holes
- Orbits
- Eclipses
- Lunar/solar calendars

Take-off
Ending Screen

At end of space travel game, E.T. has successfully docked with the "mother ship"; E.T.'s ship's lights flash and rotate, SFX of takeoff as E.T. and Elliott wave goodbye. Spaceship then changes to smaller ship then smaller as balloon at beginning. Elliott left at rocket entrance still waving. Text comes on center screen: GOODBYE.

1

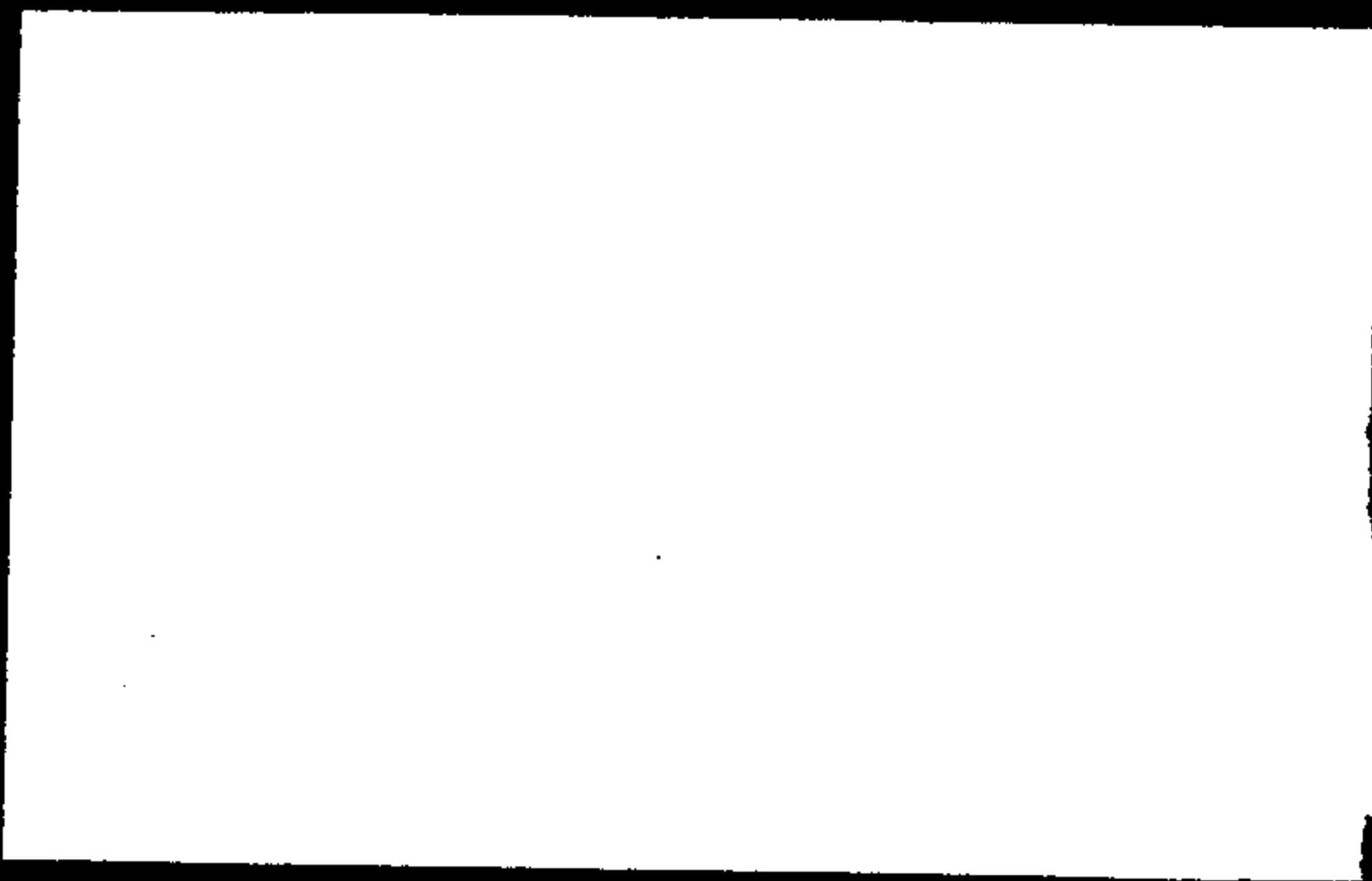


2

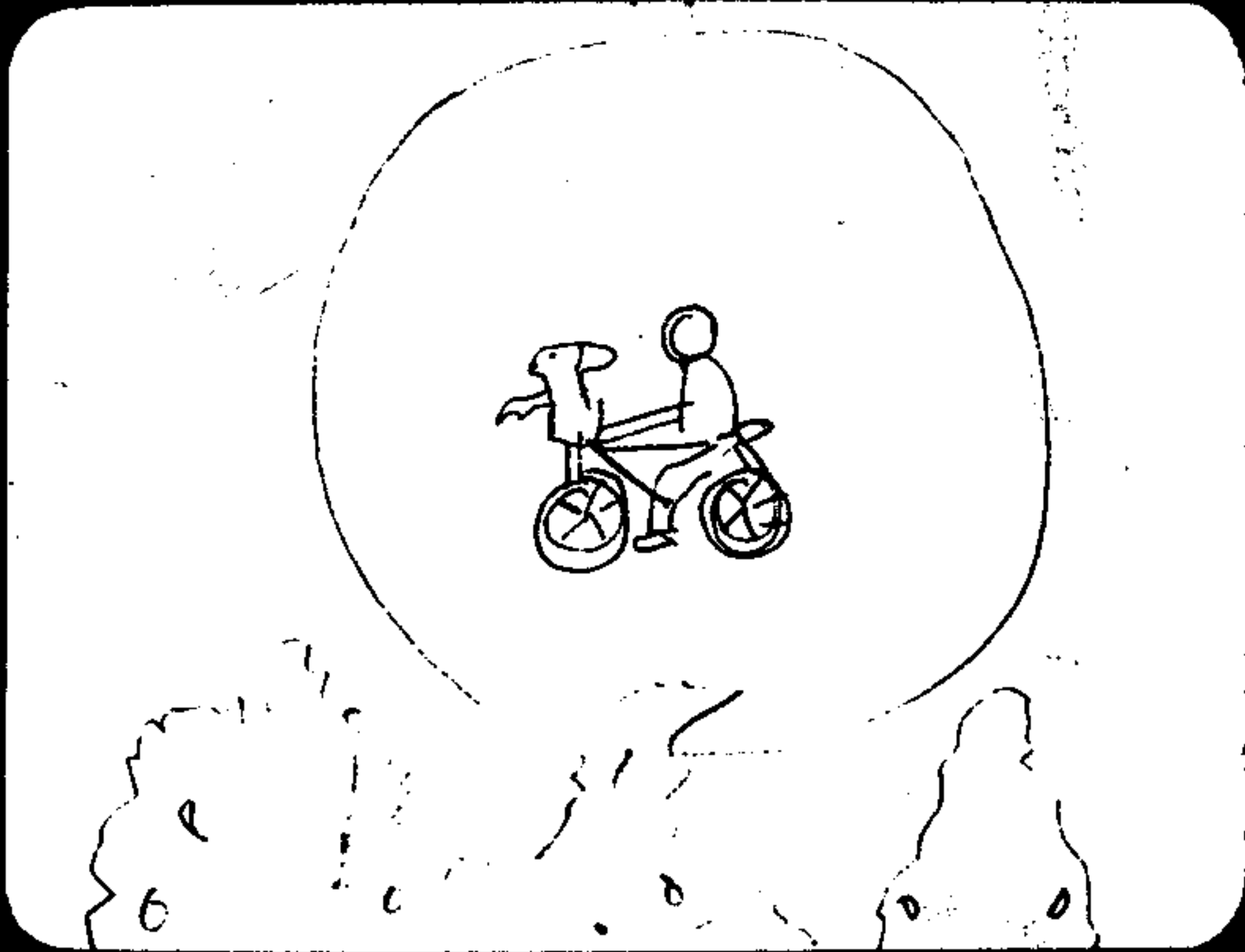
DESIGNED
BY

LOOKINGGLASS

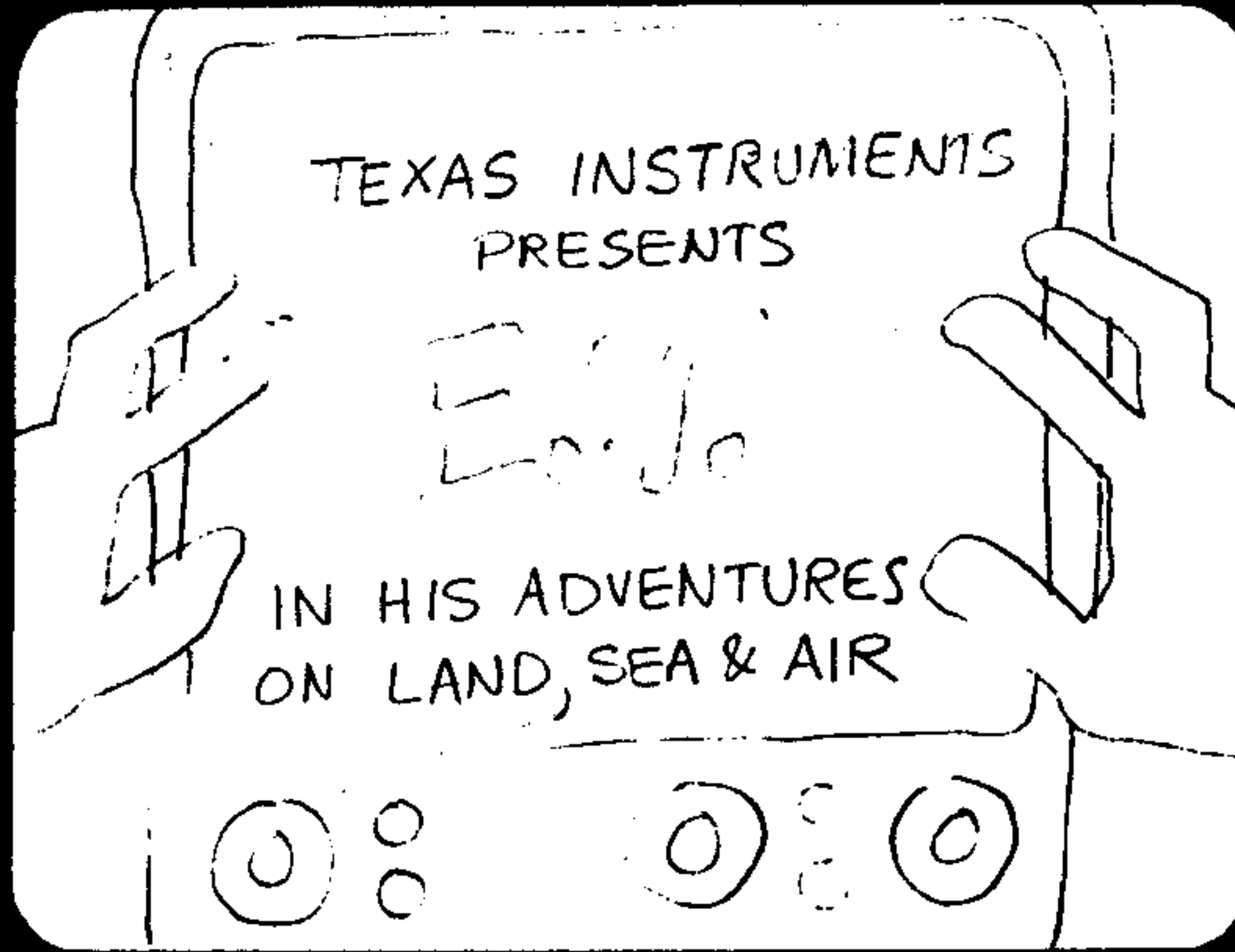
©1983 TEXAS INSTRUMENTS



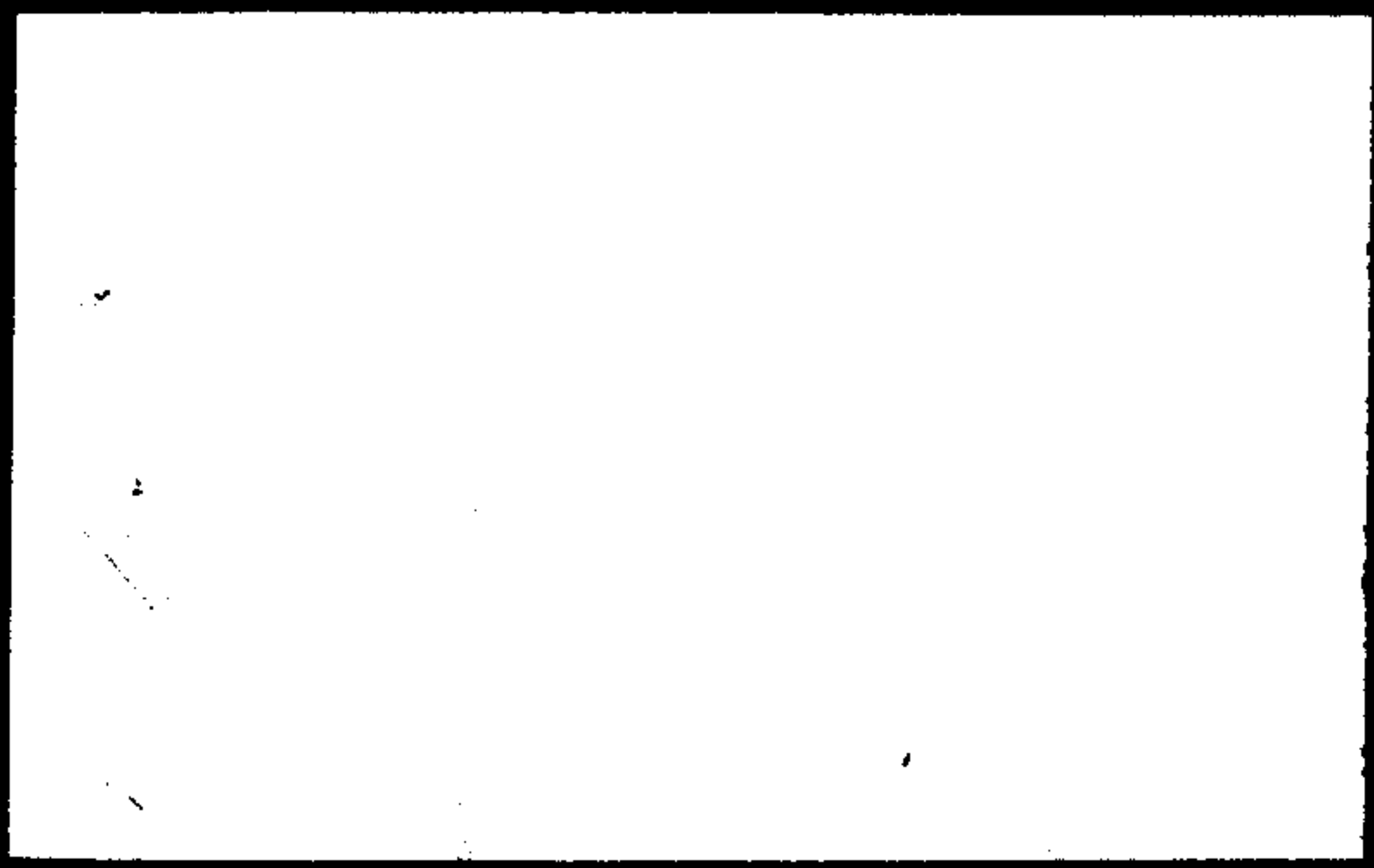
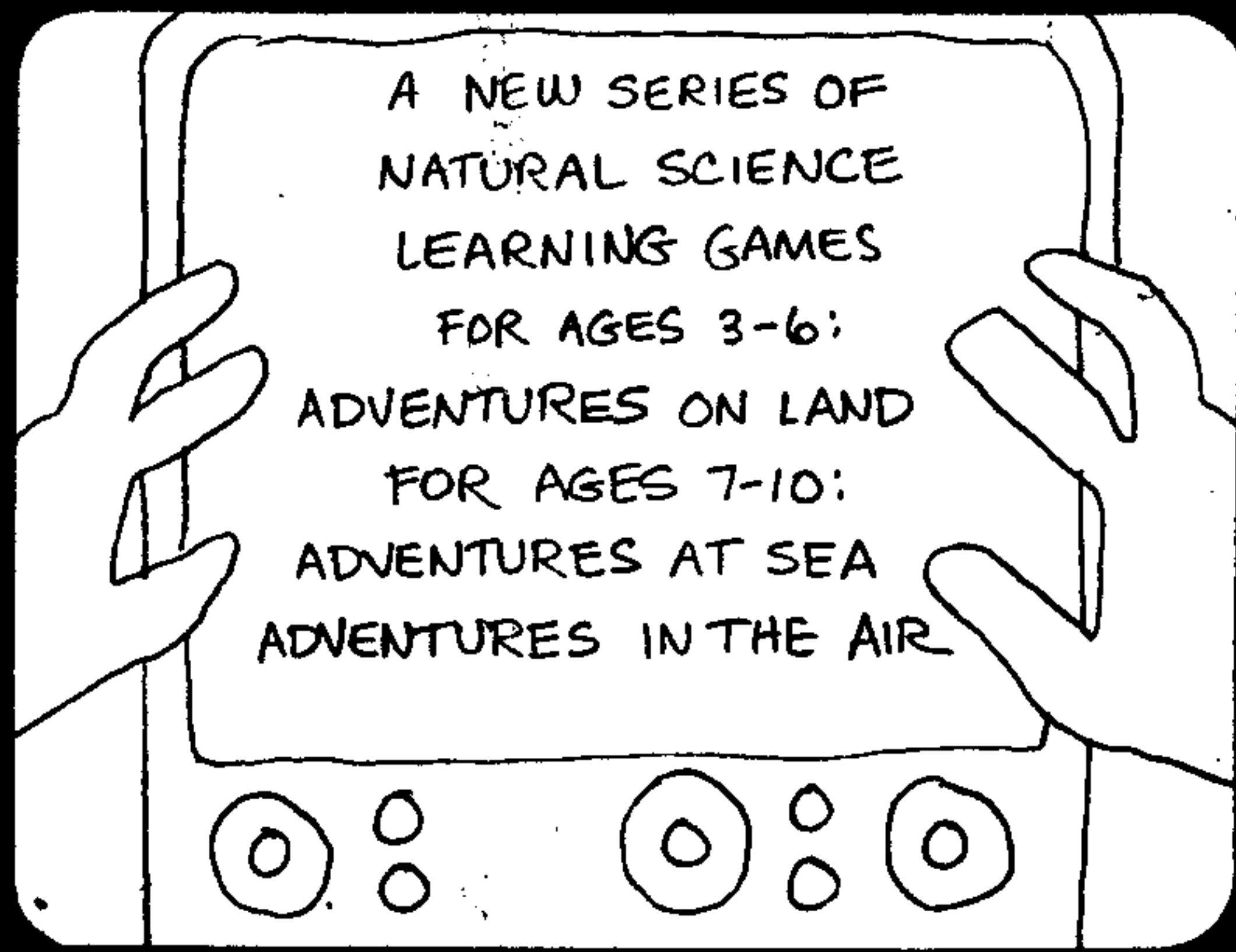
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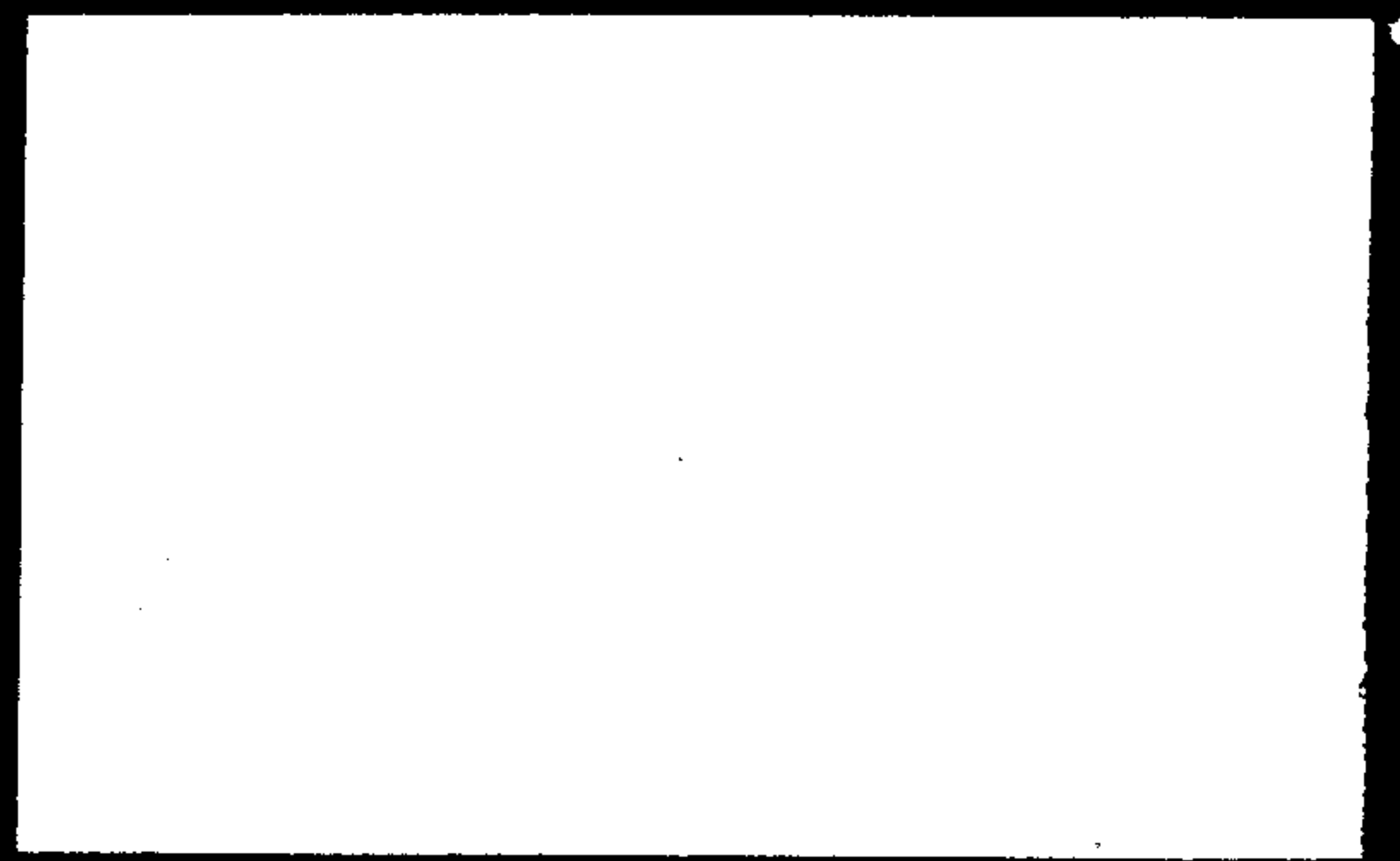
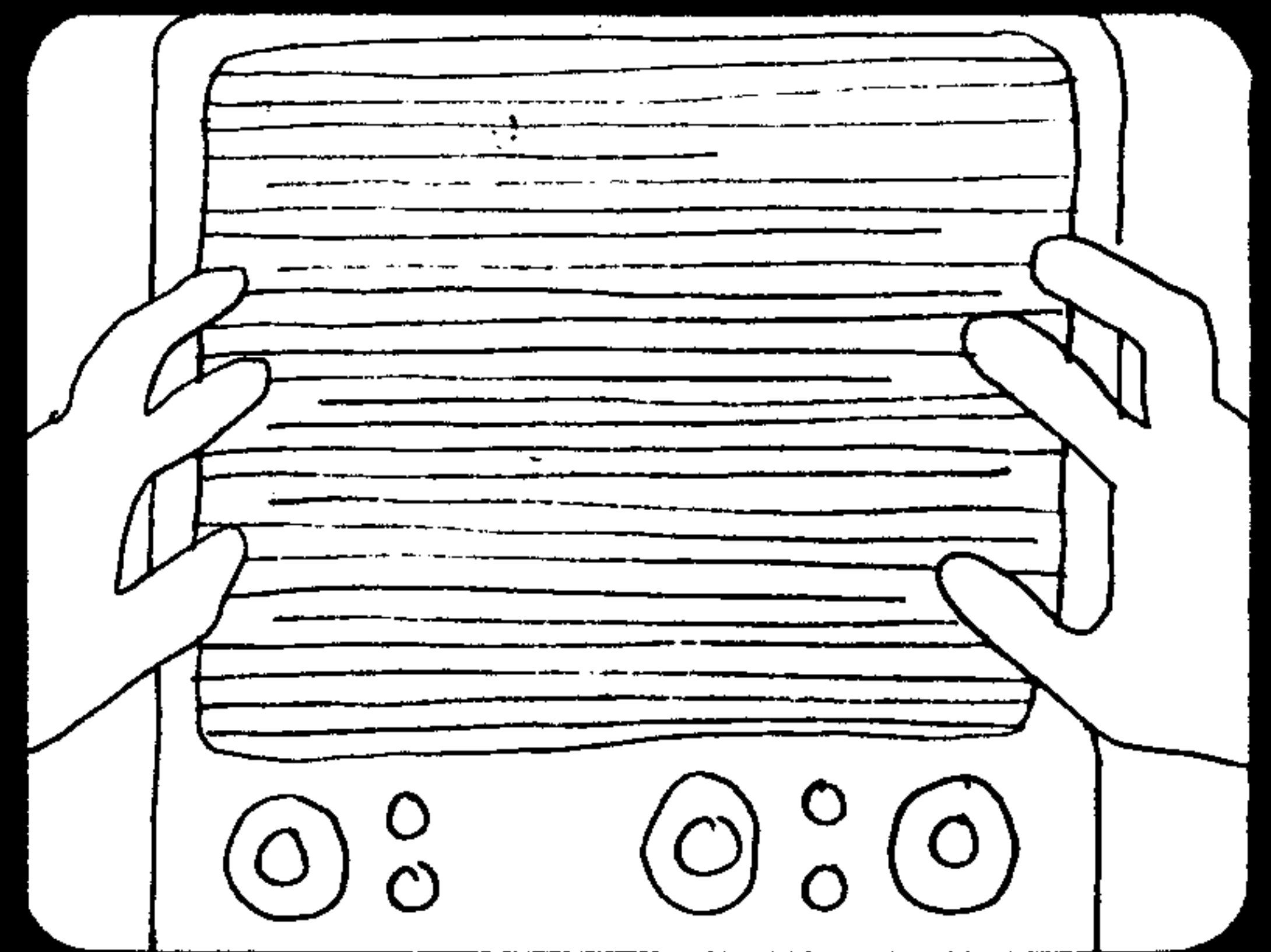
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5



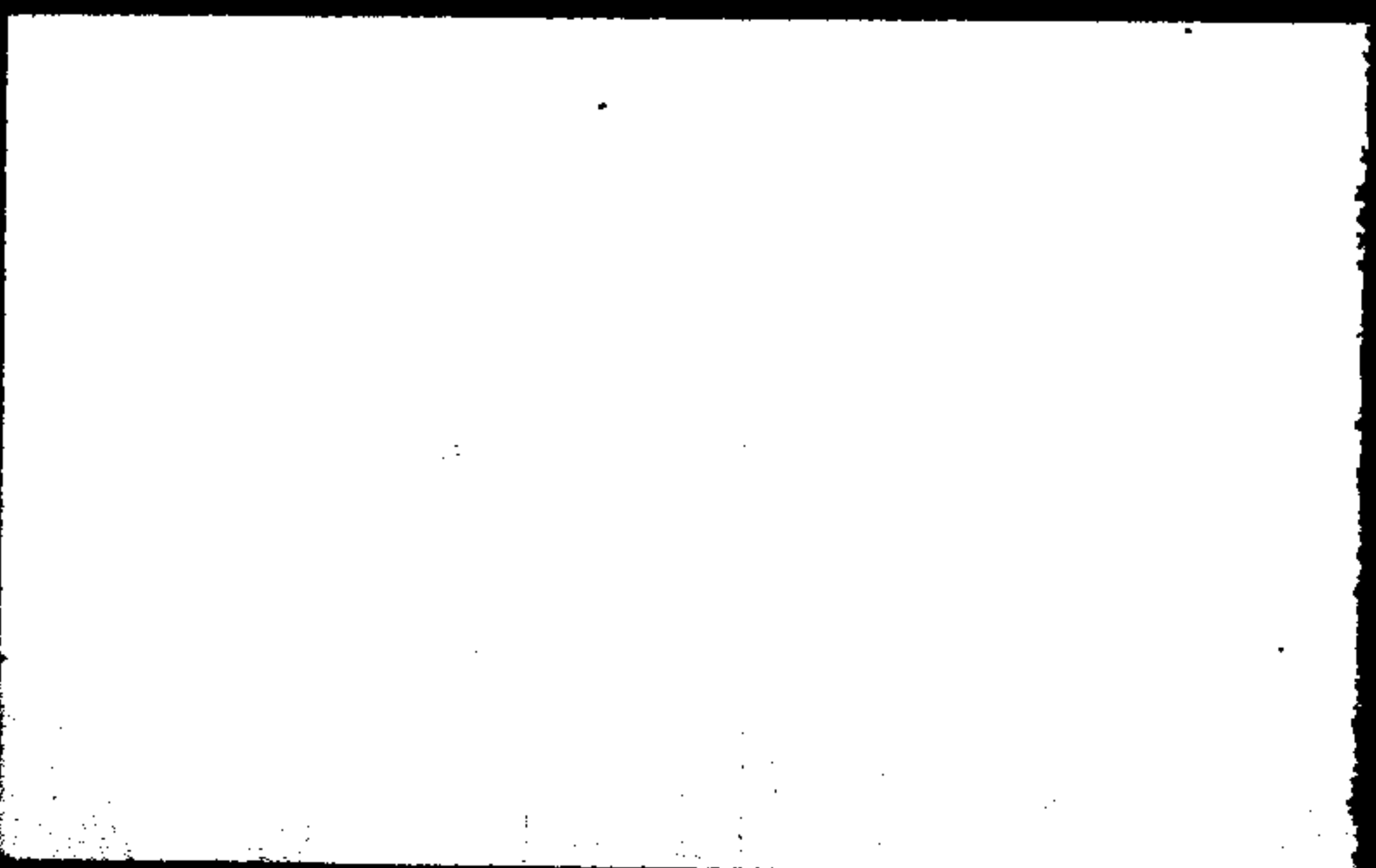
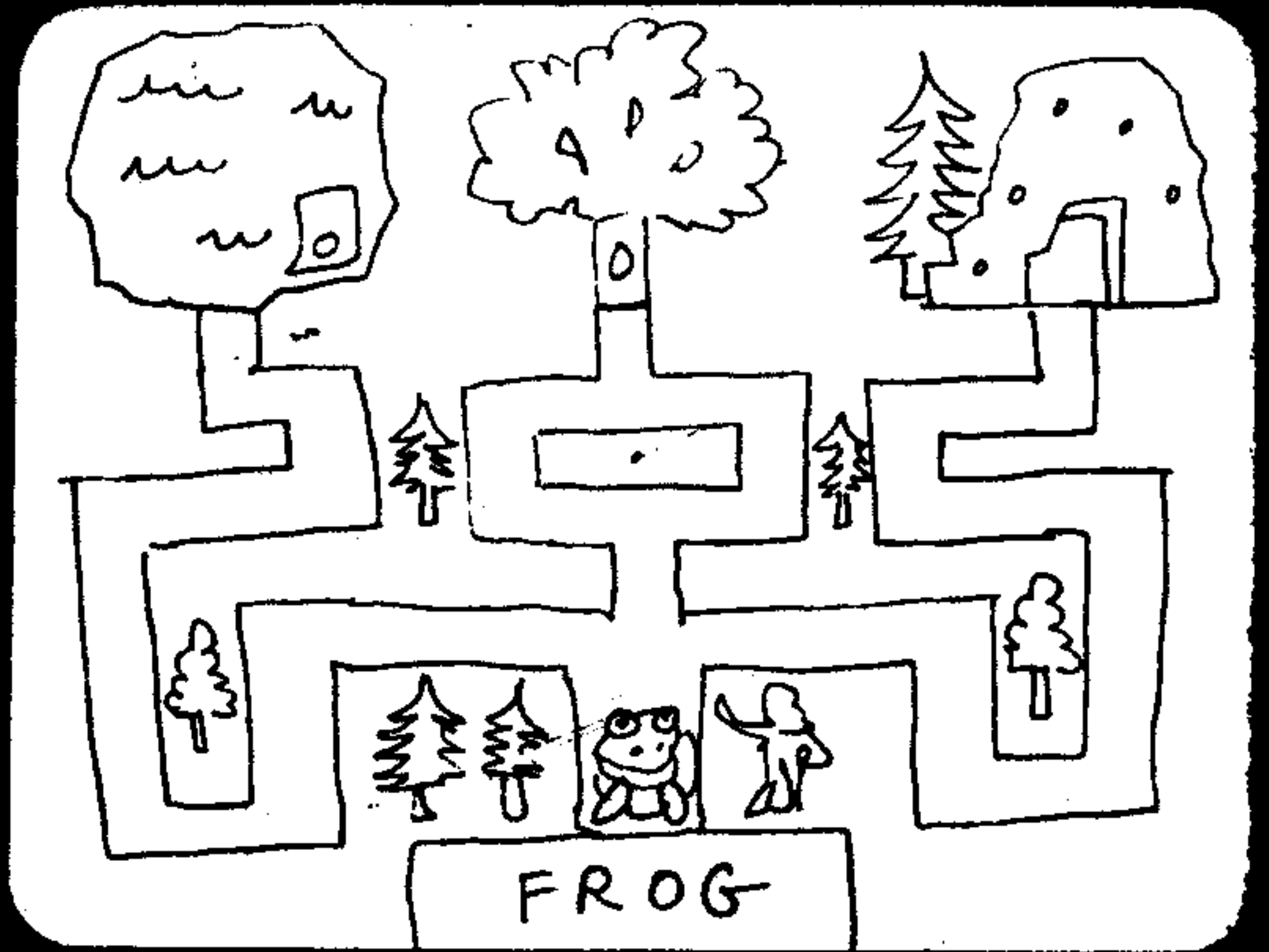
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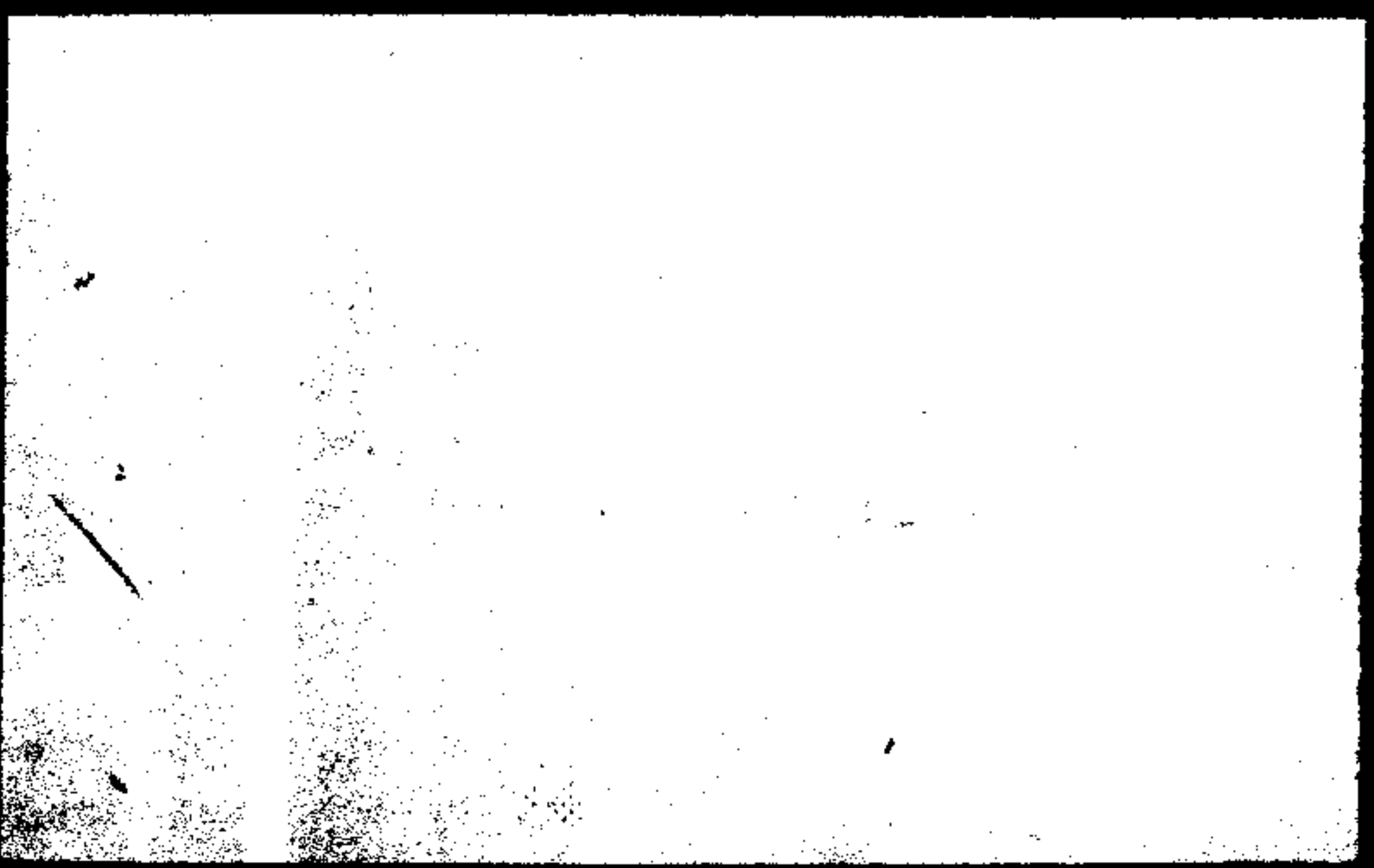
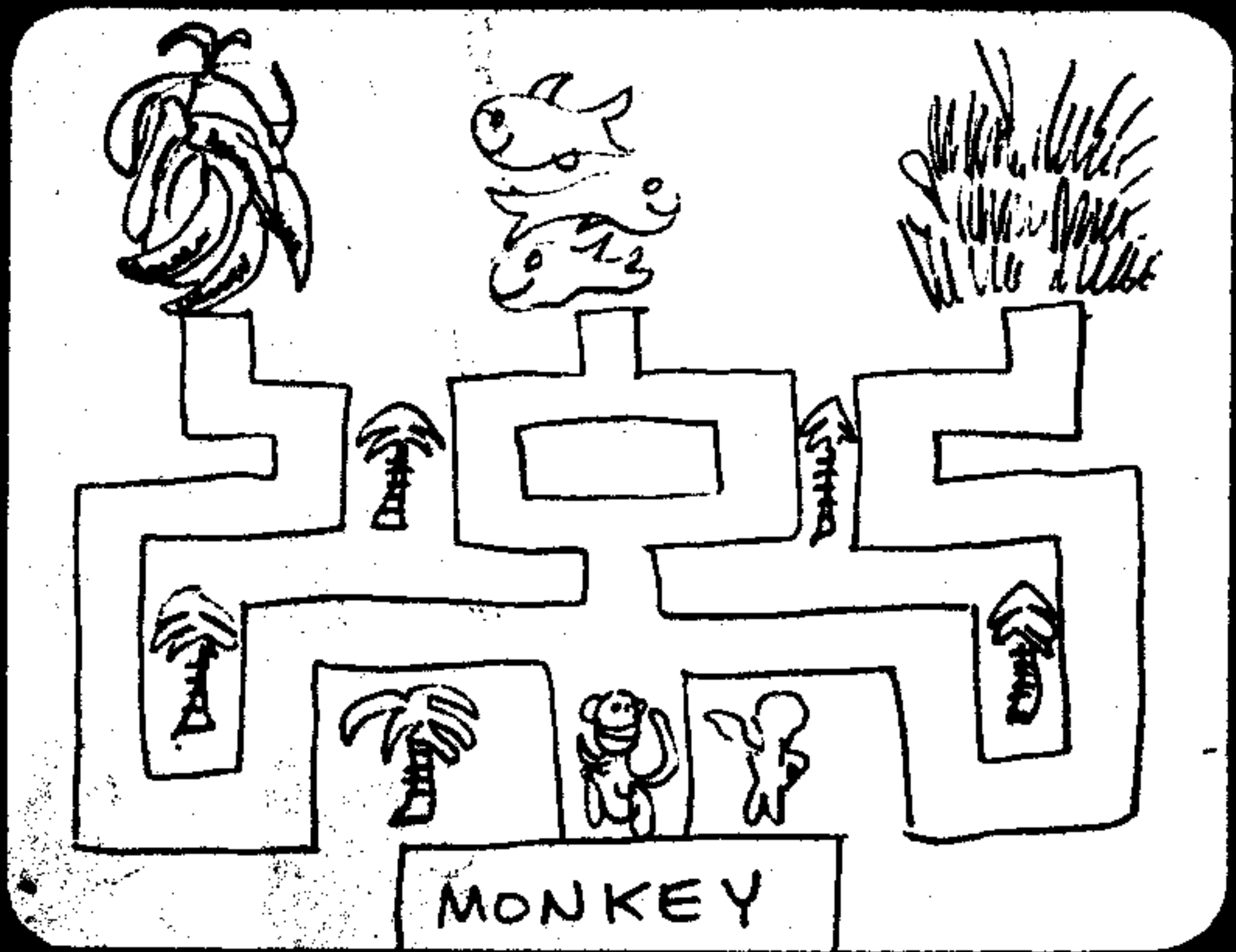
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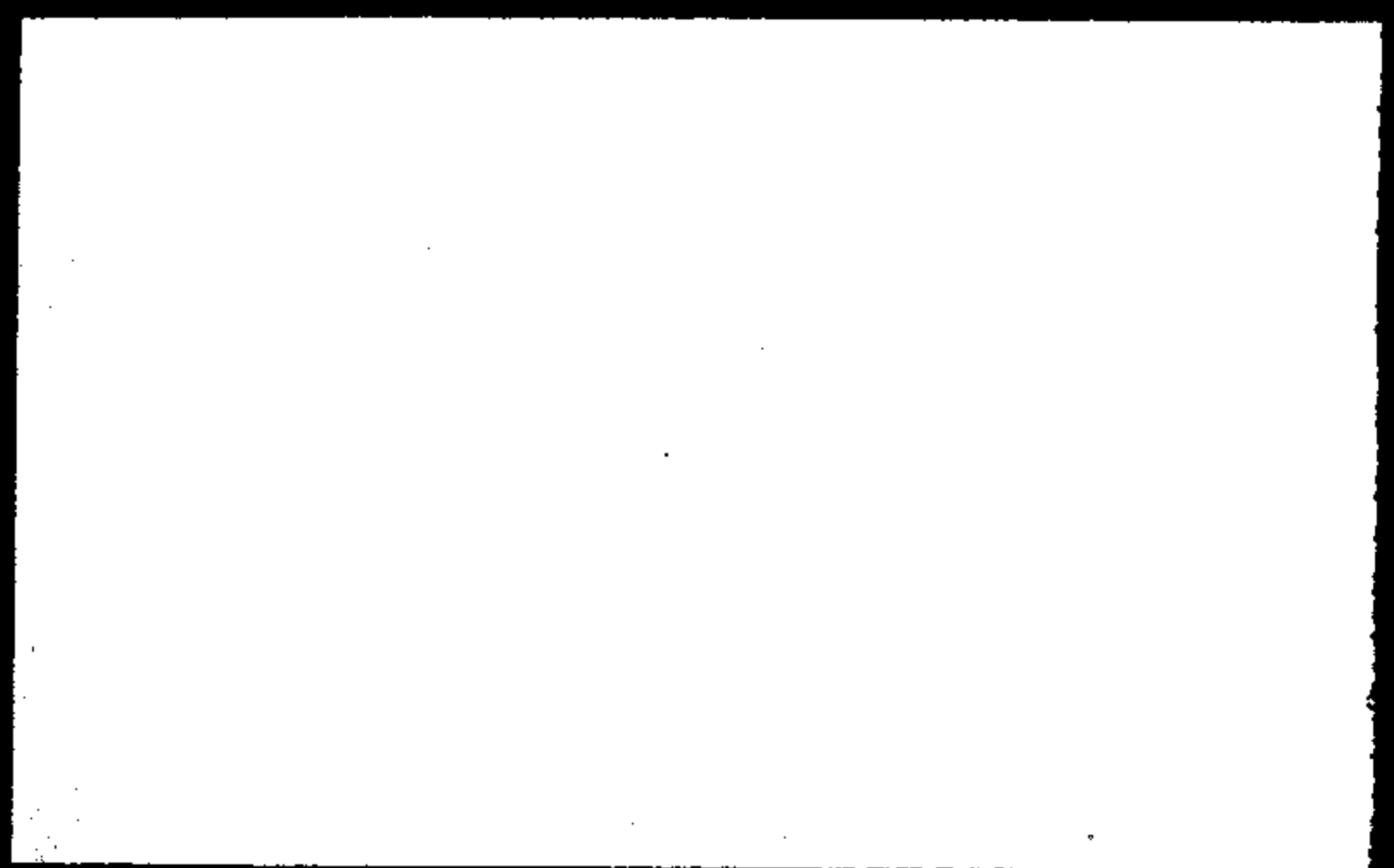
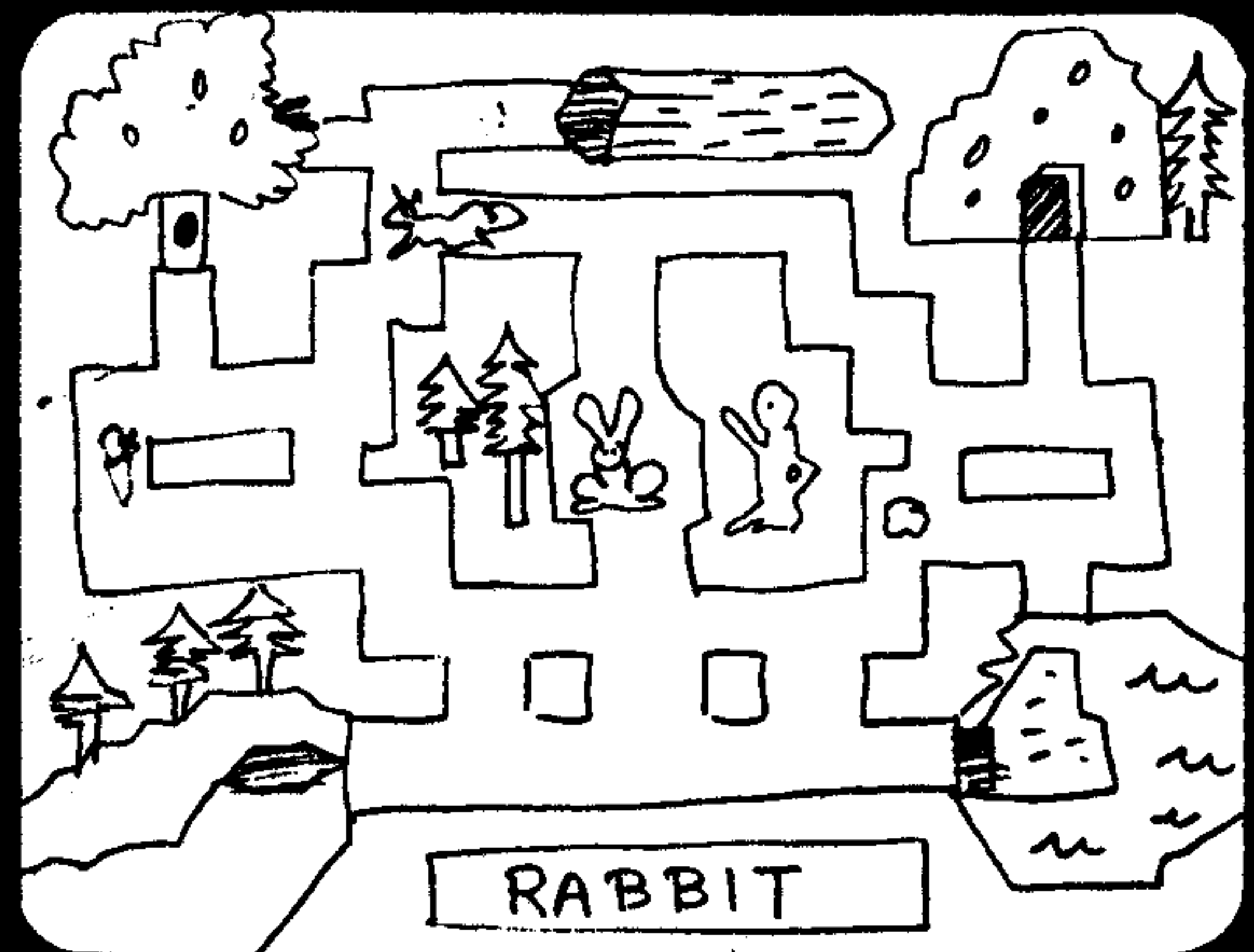
8



9



10

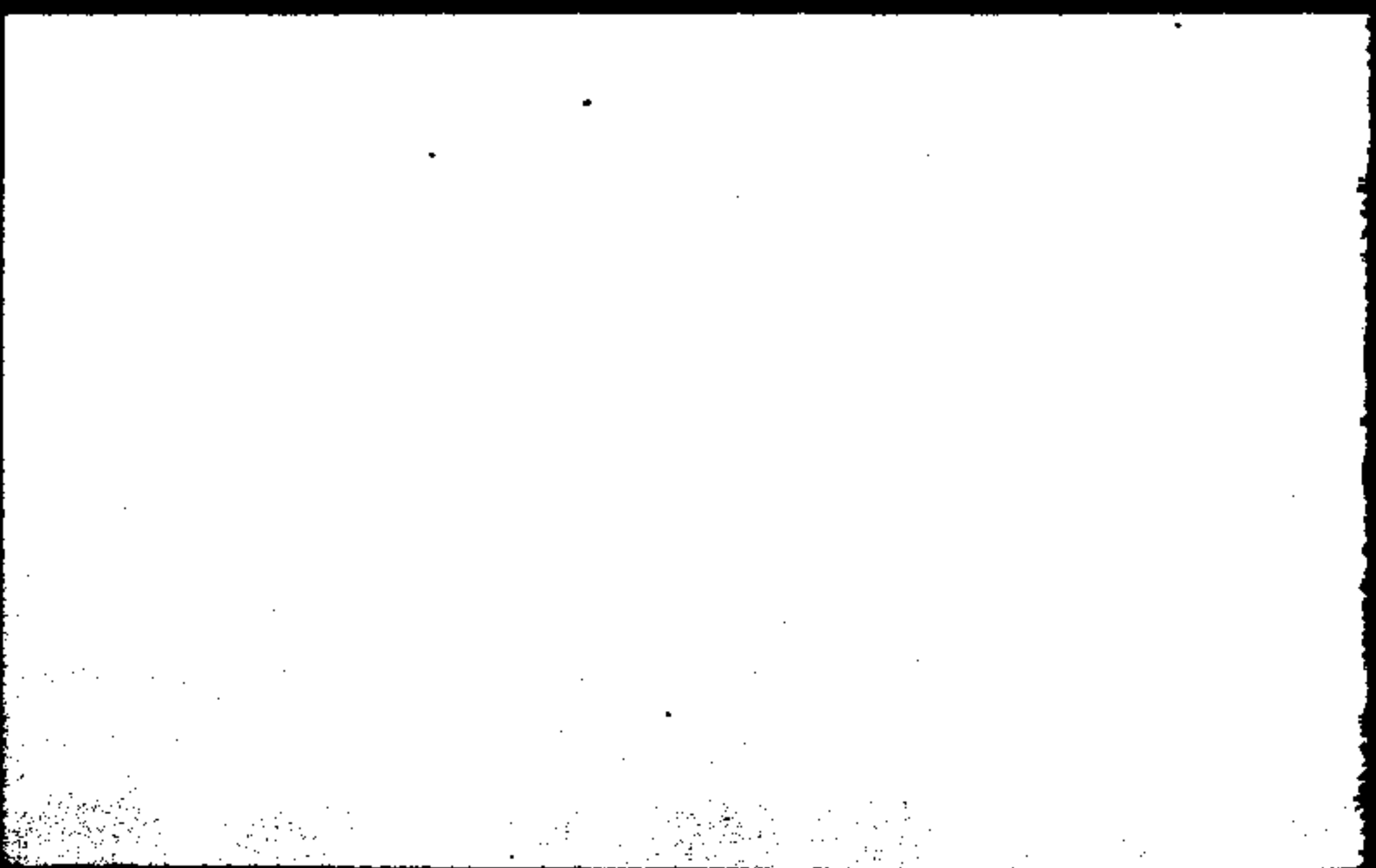
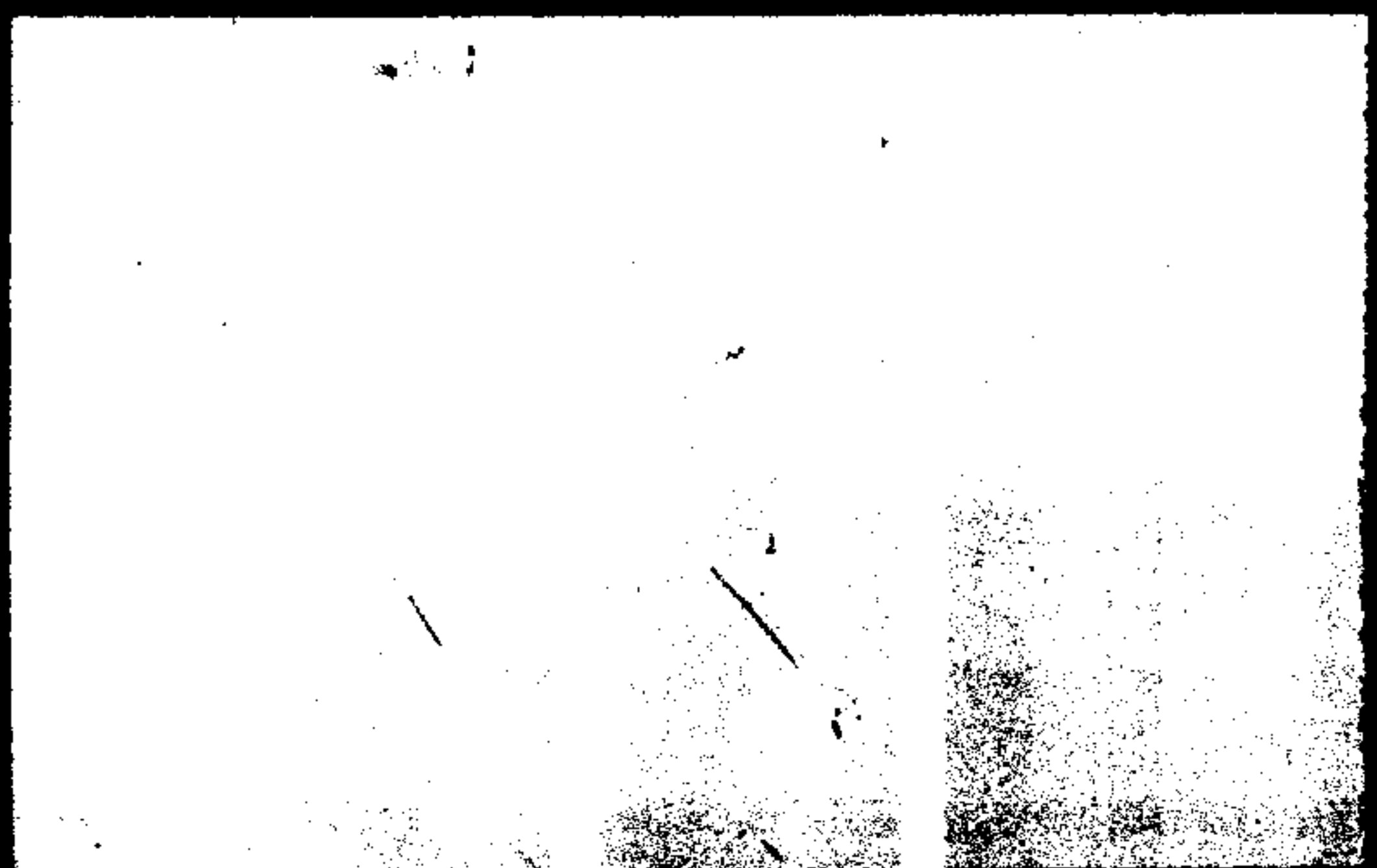
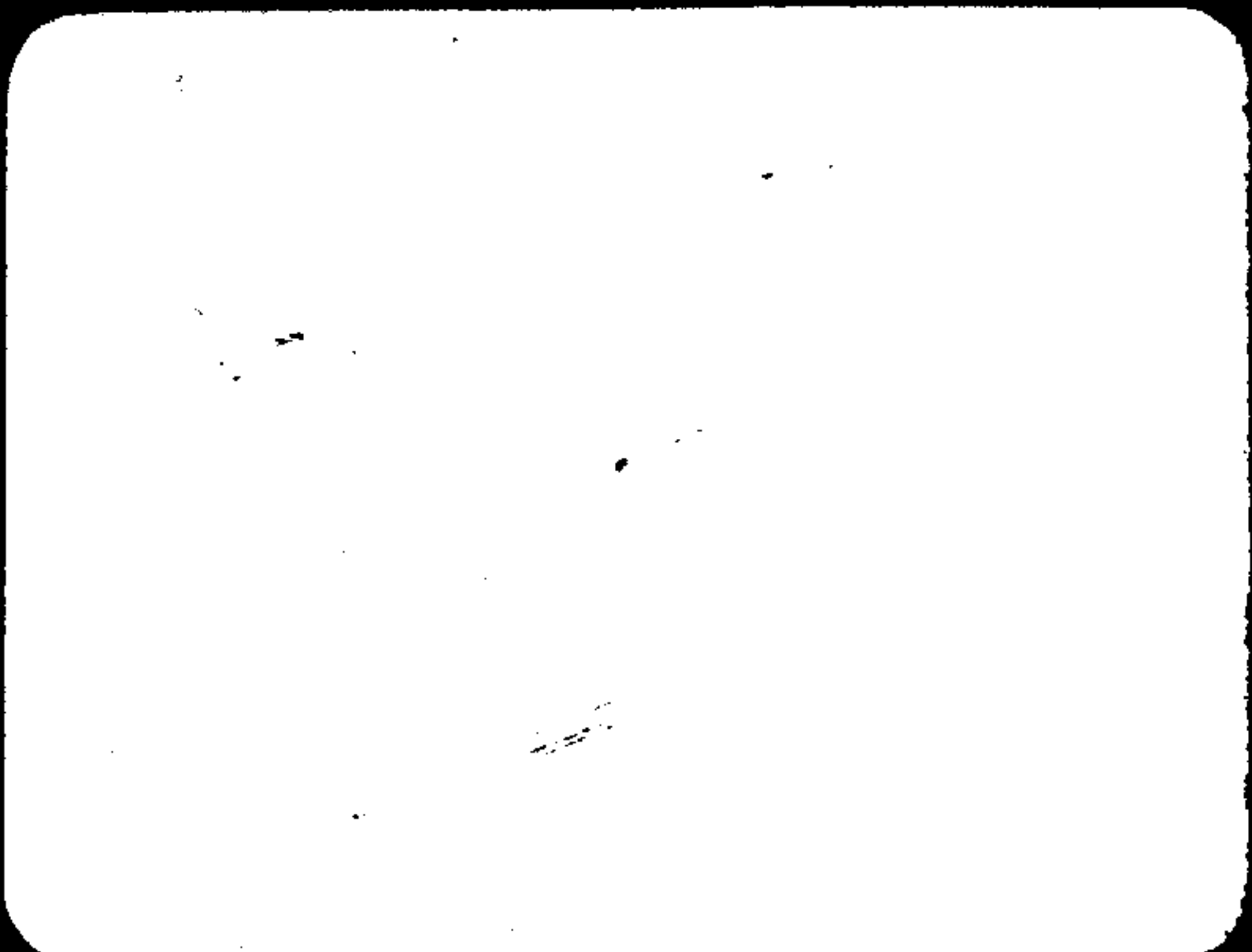


11

HELP ME IN MY ADVENTURES
AT SEA AND IN THE AIR...
LOAD DISK NUMBER 2



BE GOOD



LOOKING GLASS SOFTWARE, INC.

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Dallas, Texas 75240
Telephone (214) 396-3963



SCREEN GRAPHICS
& SPECIFICATIONS

PROJECT NAME T.I./E.T. DESIGNER MS
 CARTRIDGE TITLE Land PROGRAMMER HM
 GAME/ACTIVITY TITLE Credit / © SUELA REMARKS For CES DEMO
 SEQUENCE need by May 12

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
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DESCRIPTION



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Telephone (214) 386-3963

PROJECT NAME NEW GUESS SCREENS DESIGNER _____

CARTRIDGE TITLE _____ PROGRAMMER _____

GAME/ACTIVITY TITLE AT SEA REMARKS _____

SEQUENCE CYAN/GREEN (2 chars) TM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 6 | | | 08 | | | | | | | | | | | EE | | | | | | | | | | | | | | | | | | |
| 7 | | | 08 | | | | | | | | | | | BA | | | | | | | | | | | | | | | | | | |
| 8 | | | 08 | | | | | | | | | | | 92 | | | | | | | | | | | | | | | | | | |
| 9 | | | 08 | | | | | | | | | | | 82 | | | | | | | | | | | | | | | | | | |
| 10 | | | 00 | | | | | | | | | | | 00 | | | | | | | | | | | | | | | | | | |
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| 12 | | | 00 | | | | | | | | | | | | | | | | | | | | | | 00 | | | | | | | |
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| 15 | | | 23 | | | | | | | | | | | | | | | | | | | | | 38 | | | | | | | | |
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| 22 | | | R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

in "DATA2"

DESCRIPTION

'G' Press 1 to review clues
 Press 2 to " cities or guess (suggest GUESS THE CITY)
 Press R to return to game

done



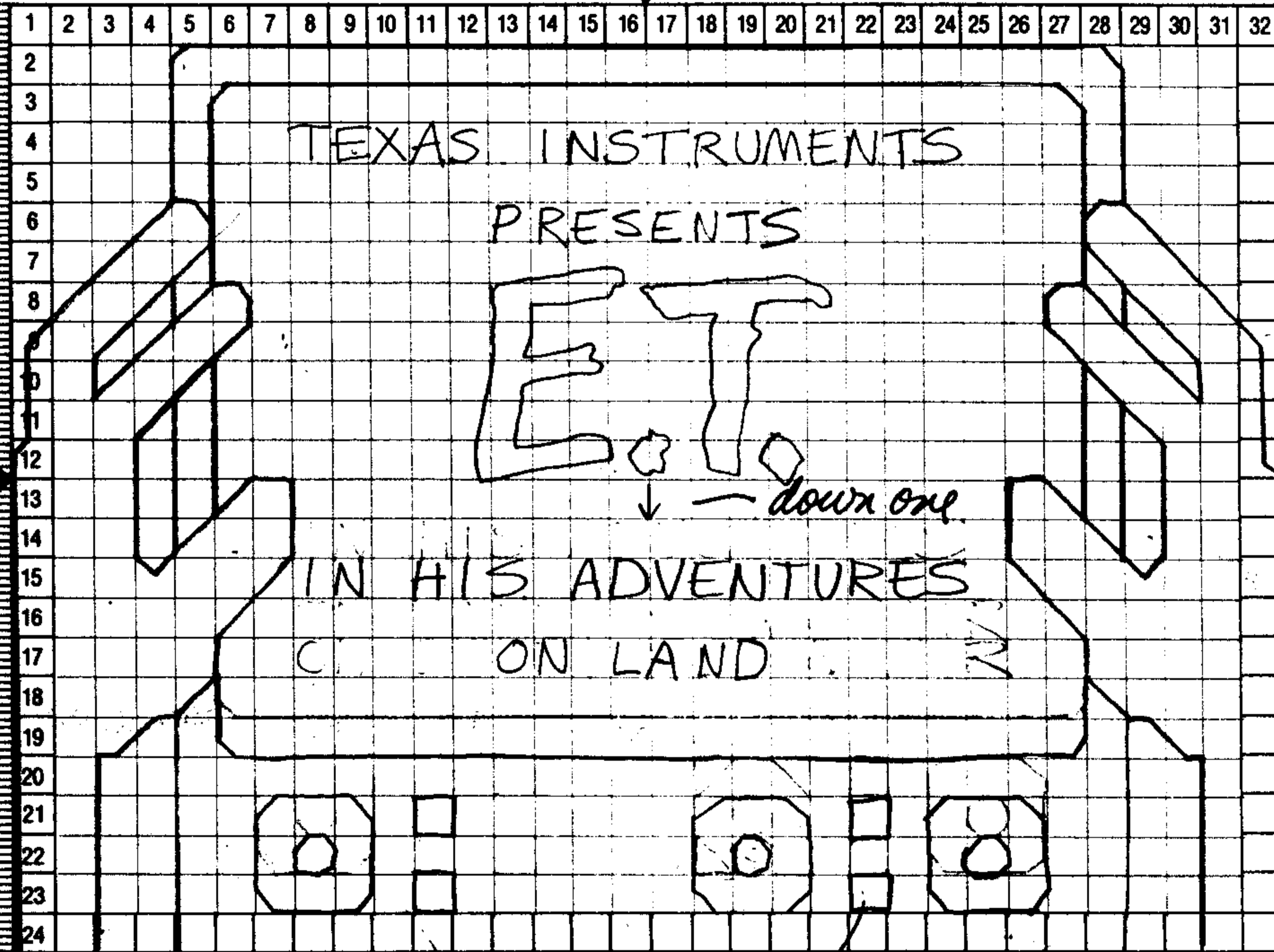
PROJECT NAME _____ DESIGNER *MS*

CARTRIDGE TITLE _____ PROGRAMMER *Hawk*

GAME/ACTIVITY TITLE *Snitro* REMARKS _____

SEQUENCE *# ~~1~~ 3*

(after intro pic of ET & ship)



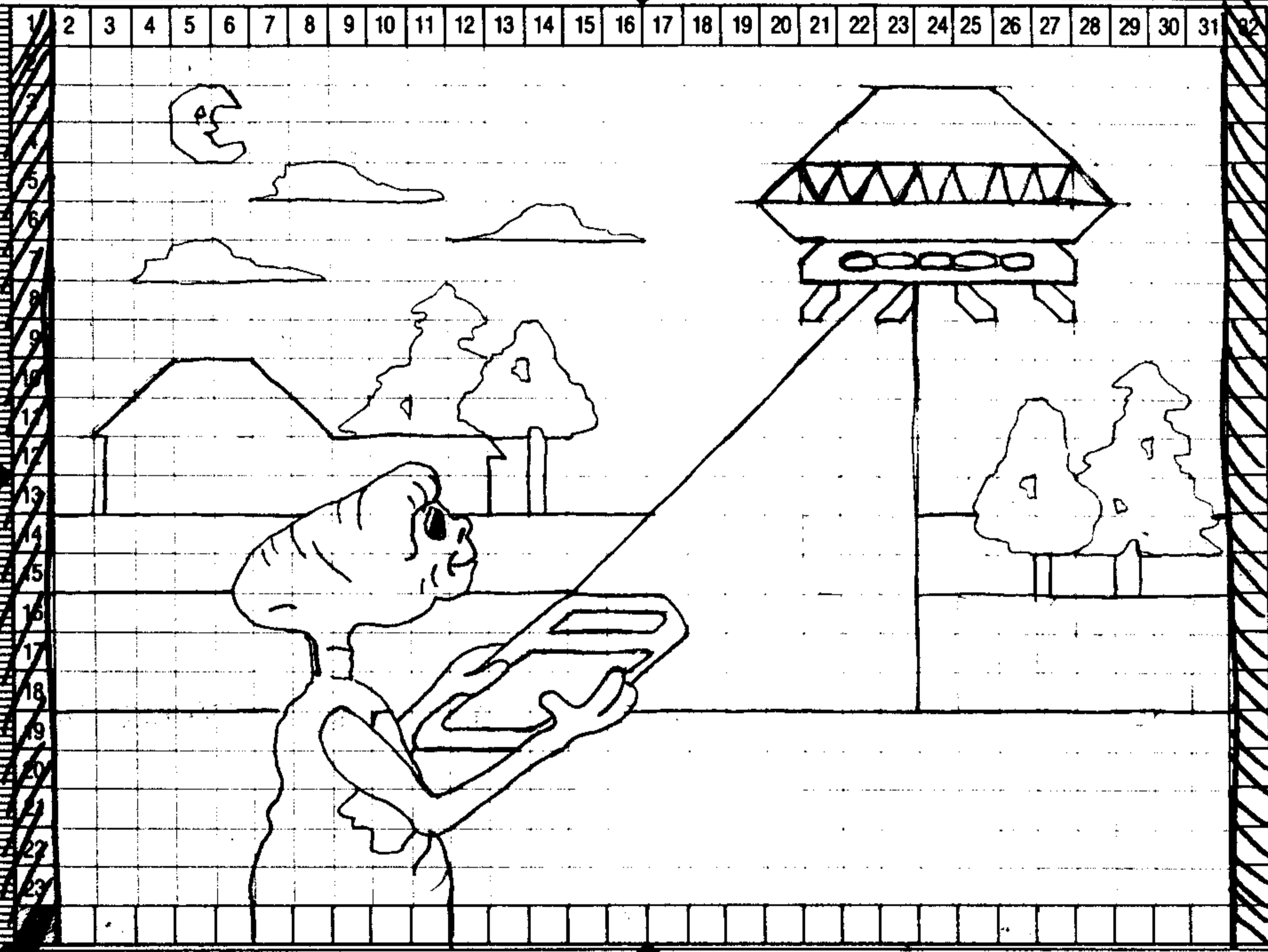
DESCRIPTION

*EITHER:
Press a key to open
OR
10 sec time out*

*lights to flash prior to
"Static" stripes coming on*

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| | |
|---------------------|------------|
| PROJECT NAME | DESIGNER |
| CARTRIDGE TITLE | PROGRAMMER |
| GAME/ACTIVITY TITLE | REMARKS |
| SEQUENCE | |



DESCRIPTION

magenta border + 1 character in each both sides Y to W to Y to W to Y

Animation:

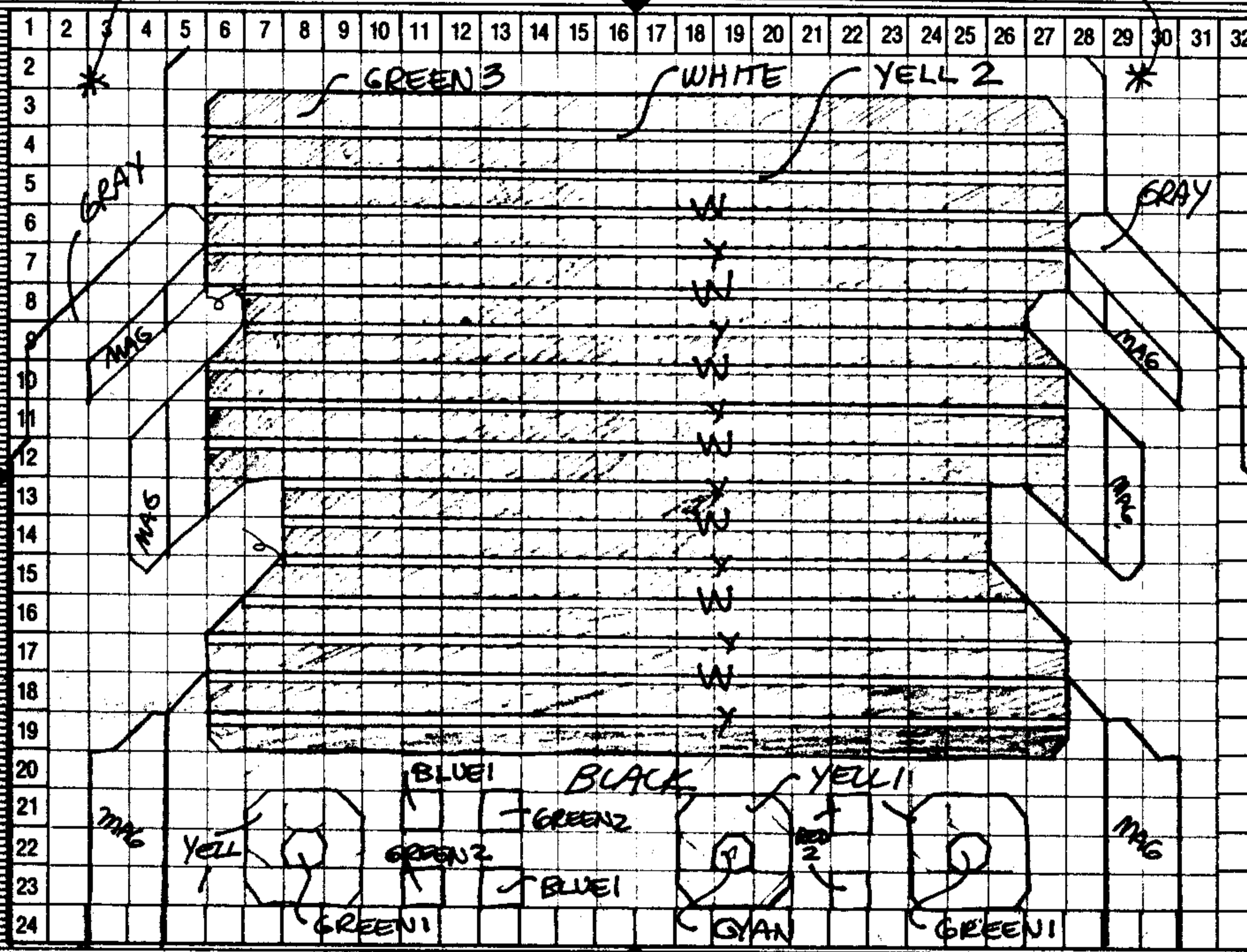
1. E.T. holding Communicator; ship scrolls from top to pos. as drawn
2. ship stops; lights rotate 1/2 sec longer then stops (lights are rotating)
3. E.T. Comm. comes "on" 2 sec then off



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PROJECT NAME OT/TI DESIGNER MS
 CARTRIDGE TITLE Land PROGRAMMER Hank Miskeloff
 GAME/ACTIVITY TITLE _____ REMARKS _____

SEQUENCE # 2A, ~~3A~~, 4A (static sequence between communicate text & bike ride) (MAGENTA)
 BK6D = MAGENTA



BORDER ASSIGN MAGENTA

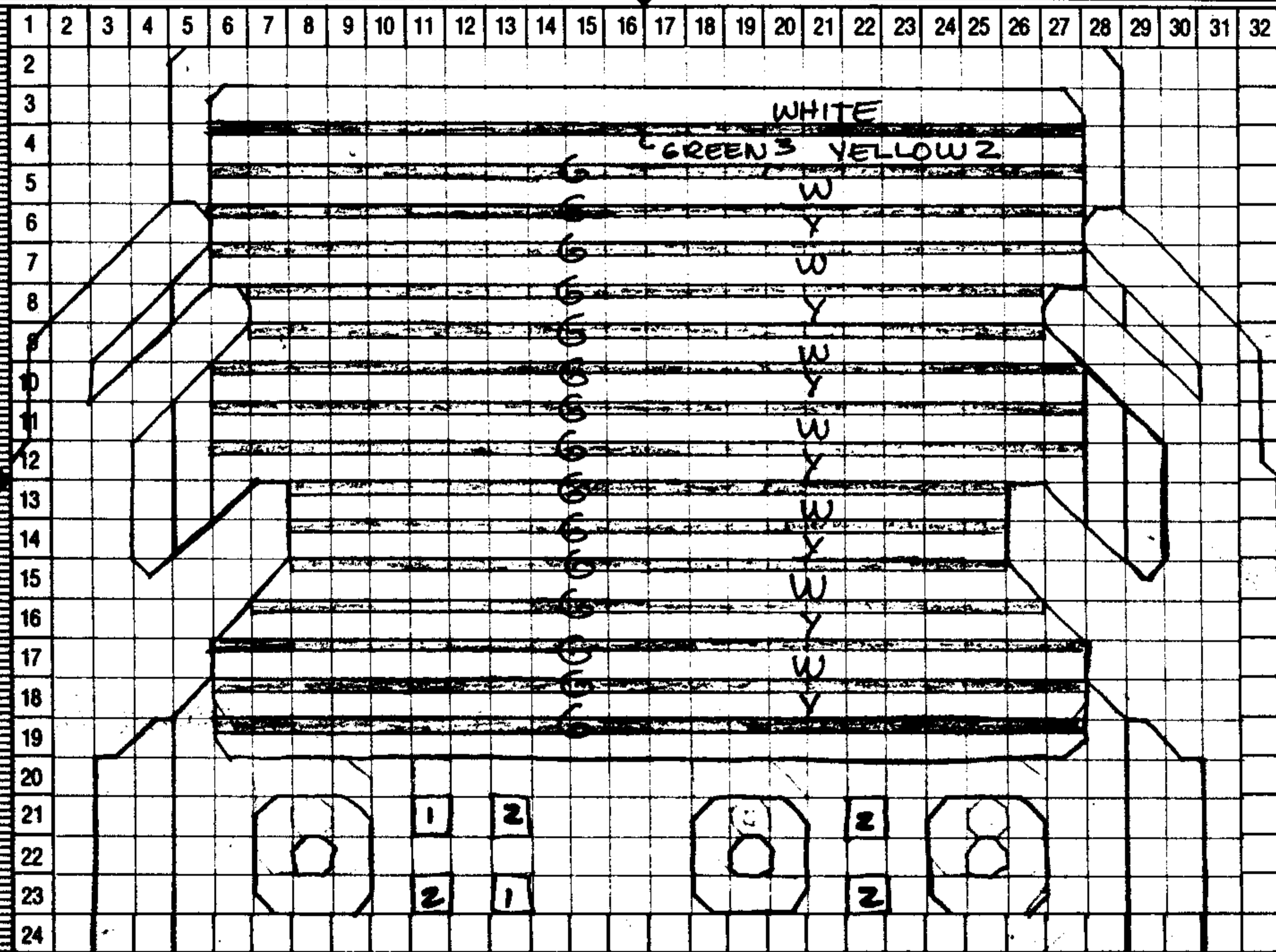
DESCRIPTION

- Message change sequence:
- ① text disappears
 - ② solid green "screen" area; hold 1 1/2 sec
 - ③ then white bars on; 1 sec hold
 - ④ then yellow bars on; 1 sec hold then advance to # 6A



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PROJECT NAME @T/T1 DESIGNER MS
 CARTRIDGE TITLE Jaid PROGRAMMER Hauke
 GAME/ACTIVITY TITLE _____ REMARKS _____
 SEQUENCE 4 (cont.)



DESCRIPTION

- ① "screen" area changes to this "screen" graphic (all at once)
- ② hold for 2 secs while SFX deet-dee-dee during hold + SFX lites flash on + off; 1st the ones on + off 2x then the 2nd 2x on + off (OFF TWICE)



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PROJECT NAME QT Intro / paid DESIGNER MS
 CARTRIDGE TITLE _____ PROGRAMMER Hauke Mischloff
 GAME/ACTIVITY TITLE _____ REMARKS _____
 SEQUENCE Site Menu # 6



DESCRIPTION

Ext on all at once:

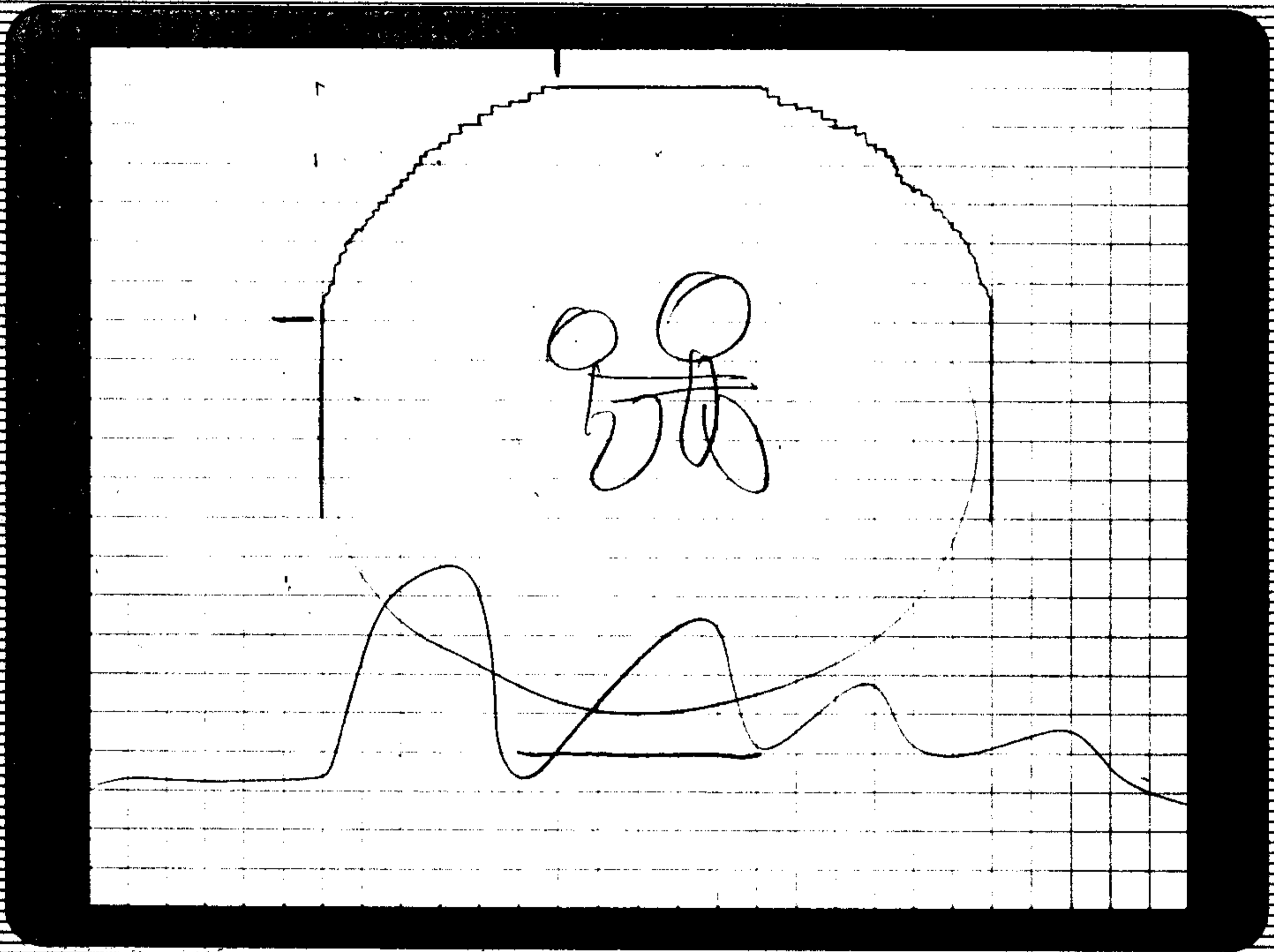
Static after this screen & before like transition



Module Title _____

Activity OR Routine Title _____

Screen Reference Number # 47



Use Color Chart code to indicate color, if desired.

- | | |
|----------------|----------------|
| 0 TRANSPARENT | 8 MEDIUM RED |
| 1 BLACK | 9 LIGHT RED |
| 2 MEDIUM GREEN | A DARK YELLOW |
| 3 LIGHT GREEN | B LIGHT YELLOW |
| 4 DARK BLUE | C DARK GREEN |
| 5 LIGHT BLUE | D MAGENTA |
| 6 DARK RED | E GRAY |
| 7 CYAN | F WHITE |

Remarks:

Bike Ride Transition



| | |
|---------------------|------------|
| PROJECT NAME | DESIGNER |
| CARTRIDGE TITLE | PROGRAMMER |
| GAME/ACTIVITY TITLE | REMARKS |
| SEQUENCE | |

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| 9 | +4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 12 | +2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 15 | +2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DESCRIPTION

Trees + colour as per others



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| CARTRIDGE TITLE | PROGRAMMER |
| GAME/ACTIVITY TITLE | REMARKS |
| SEQUENCE | |

FEED THE ANIMALS

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



desert/jungle trees



ON

TAKE THE
ANIMALS HOME!

HELP E.T.'S SPACESHIP
LAND. USE JOYSTICKS OR
ARROWS TO TAKE THE FOREST
ANIMALS TO THEIR HOMES.

FOOD.

PRESS A KEY TO GO ON.

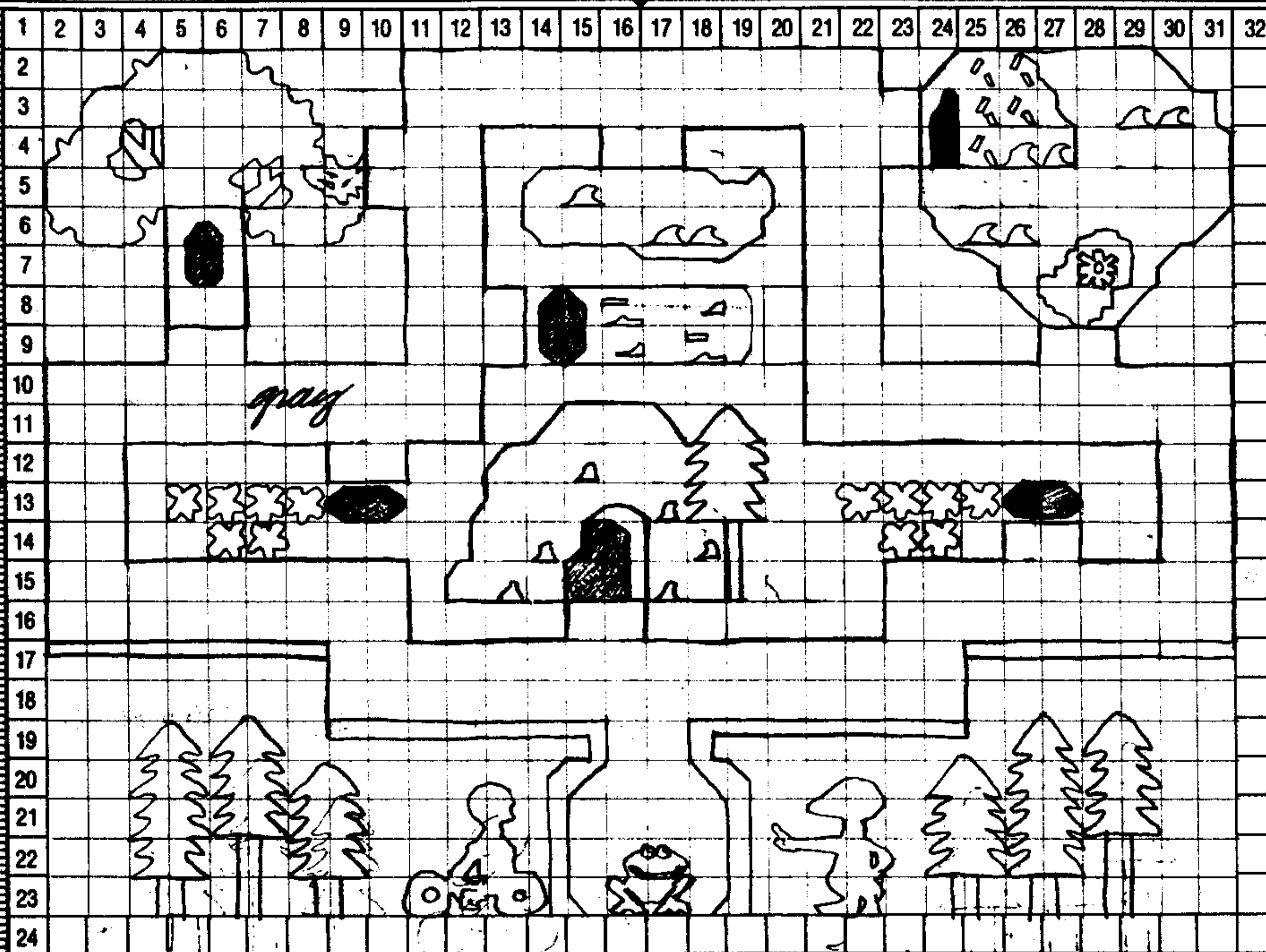
DESCRIPTION

| | | |
|---------|----------|----------|
| Colors: | BAR: | BORDER: |
| JUNGLE: | MAGENTA | BLUE 1 |
| FOREST: | YELLOW 1 | MAGENTA |
| DESERT: | RED 3 | YELLOW 2 |

DESERT
JUNGLE

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PROJECT NAME T.I. / E.T. DESIGNER MS
 CARTRIDGE TITLE LAND PROGRAMMER HM
 GAME/ACTIVITY TITLE ANIMALS & THEIR HOMES REMARKS LAYOUT ONLY
 SEQUENCE LEVEL 2 - MAIN PLAY



DESCRIPTION

Homes

- Tree w/ hole & nest (2)
- Hole (L) (1)
- Hole (R) (1)
- Cave (1)

- Pond with pad & dam (2)
- Hollow log (1)
- Pond (1)



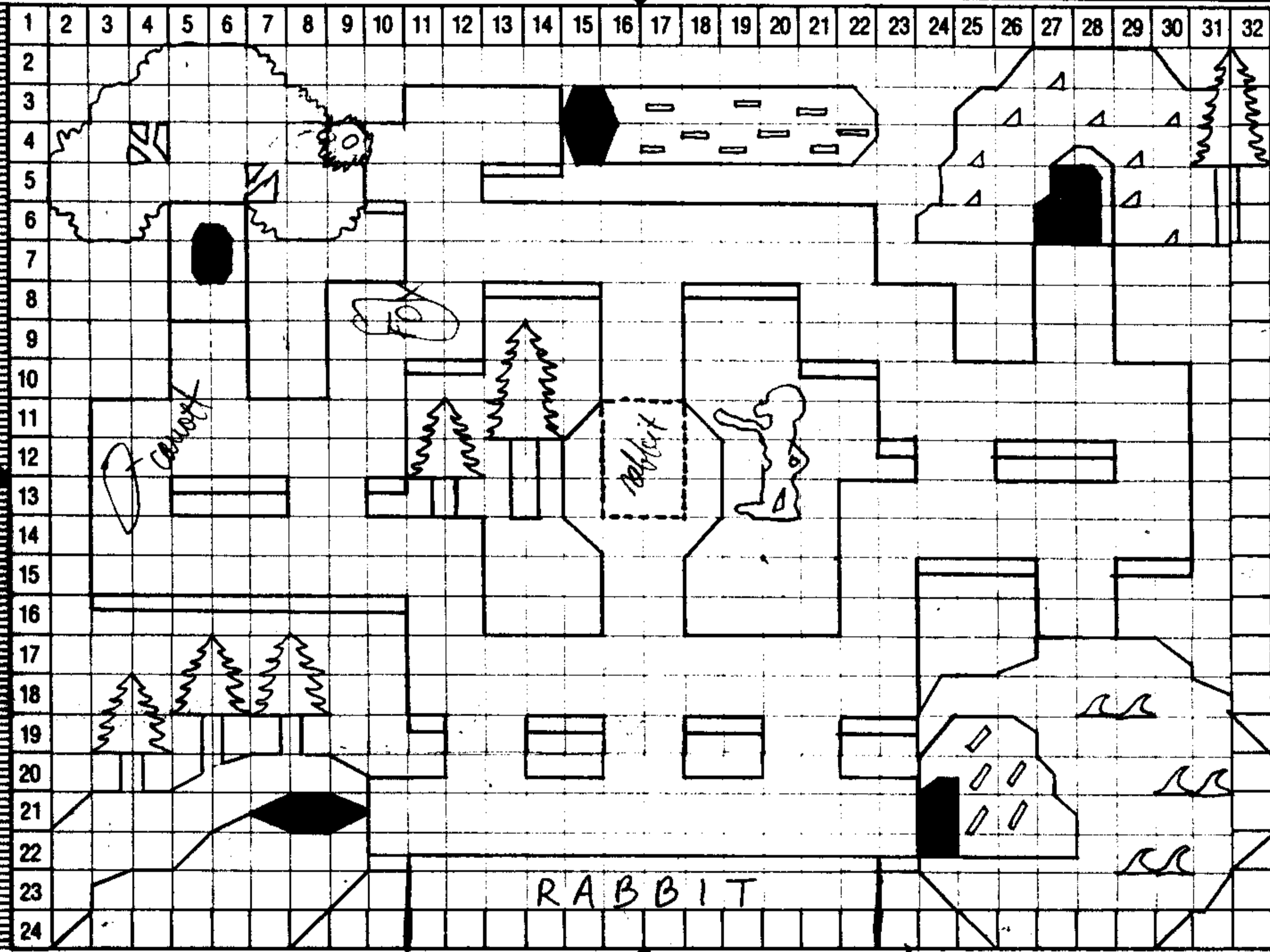
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PROJECT NAME TI/E.T. DESIGNER _____

CARTRIDGE TITLE LAND PROGRAMMER HM

GAME/ACTIVITY TITLE ANIMALS & HOMES REMARKS _____

SEQUENCE LEVEL 2 - forest animals



DESCRIPTION



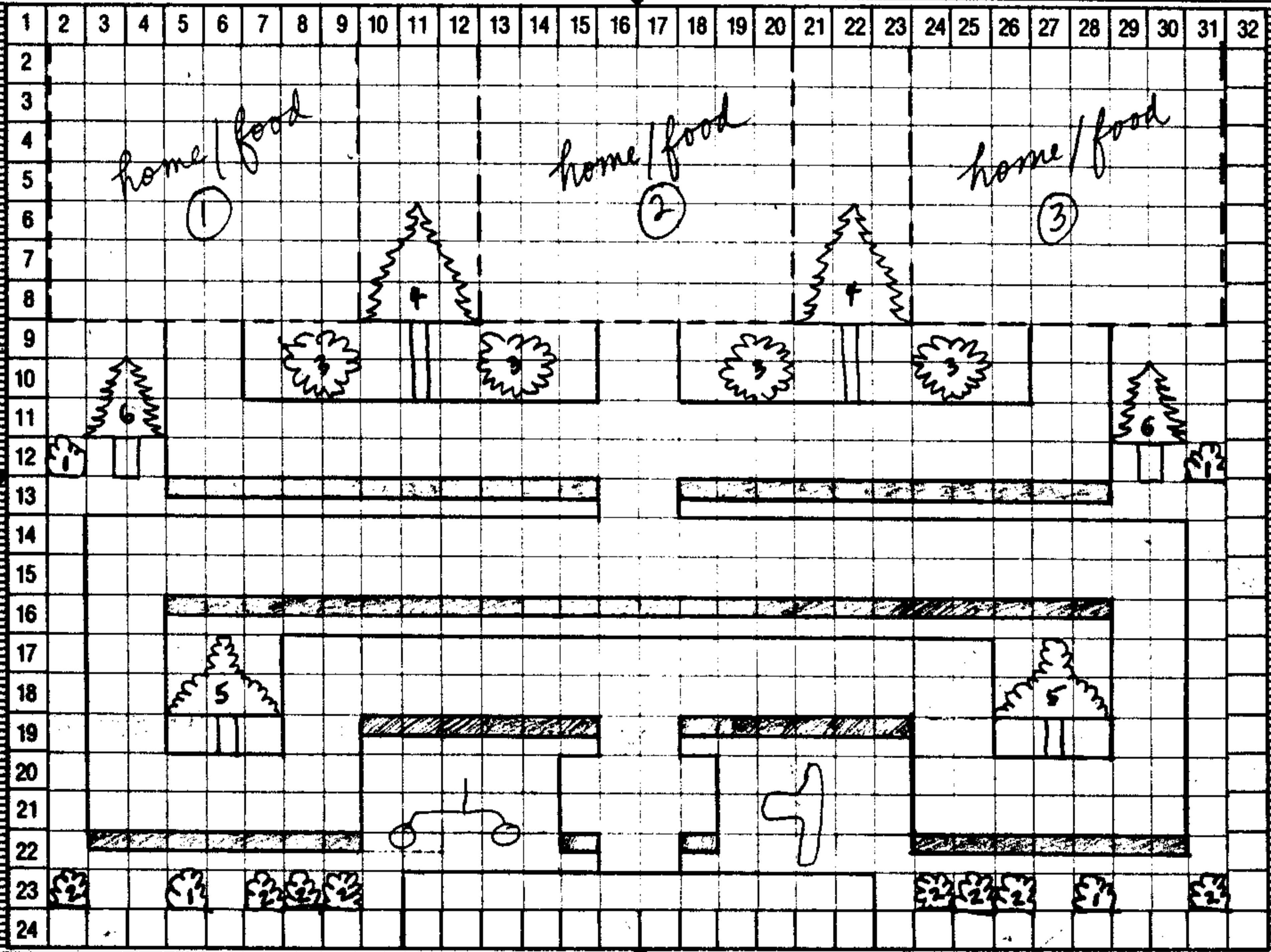
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PROJECT NAME _____ DESIGNER _____

CARTRIDGE TITLE _____ PROGRAMMER _____

GAME/ACTIVITY TITLE _____ REMARKS _____

SEQUENCE _____



DESCRIPTION _____

forest



PROJECT NAME _____

DESIGNER _____

CARTRIDGE TITLE _____

PROGRAMMER _____

GAME/ACTIVITY TITLE _____

REMARKS _____

SEQUENCE

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| 4 | | | | <i>home/food</i> | | | | | | | | | | | | <i>home/food</i> | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DESCRIPTION

jungle



13711 Creekside Place
Dallas, Texas 75240
Telephone (214) 386-3963

PROJECT NAME _____ DESIGNER _____

CARTRIDGE TITLE _____ PROGRAMMER _____

GAME/ACTIVITY TITLE _____ REMARKS _____

SEQUENCE _____

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | | | | |
|----|---|---|-----------|---|---|---|---|---|----|----|----|-----------|----|----|----|----|----|----|----|----|----|----|----|----|-----------|----|----|----|----|----|----|--|--|--|--|
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | home/food | | | | | | | | | home/food | | | | | | | | | | | | | home/food | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | ① | | | | | | | | | | | ② | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DESCRIPTION

desert
 lit + ny
 blue = lightest green w/ cyan part
 = magenta w/ cyan part
 = ... with ...

LT. silhouette black

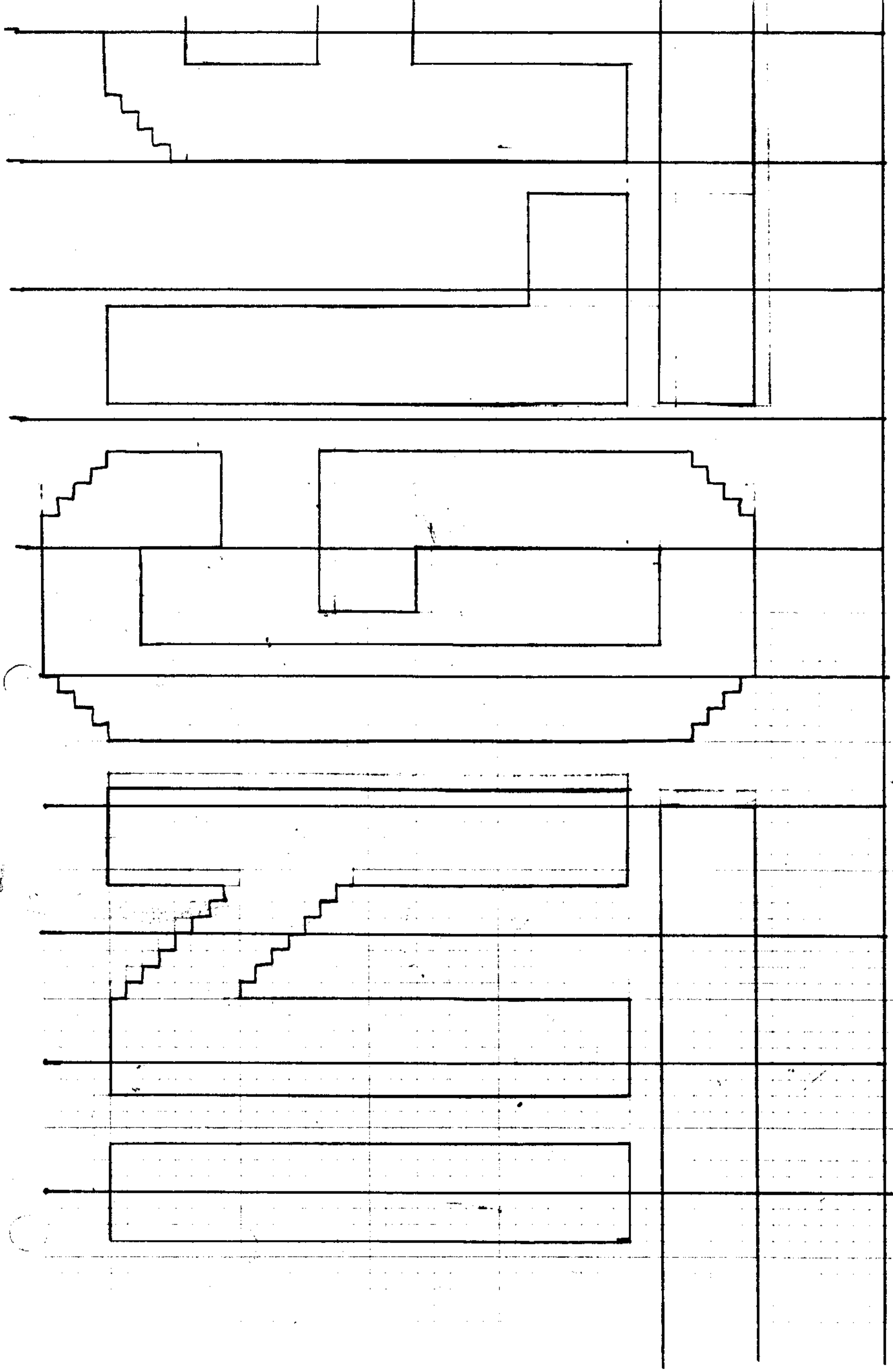
13711 Creekside Place
Dallas, Texas 75240
Telephone (214) 386-3963

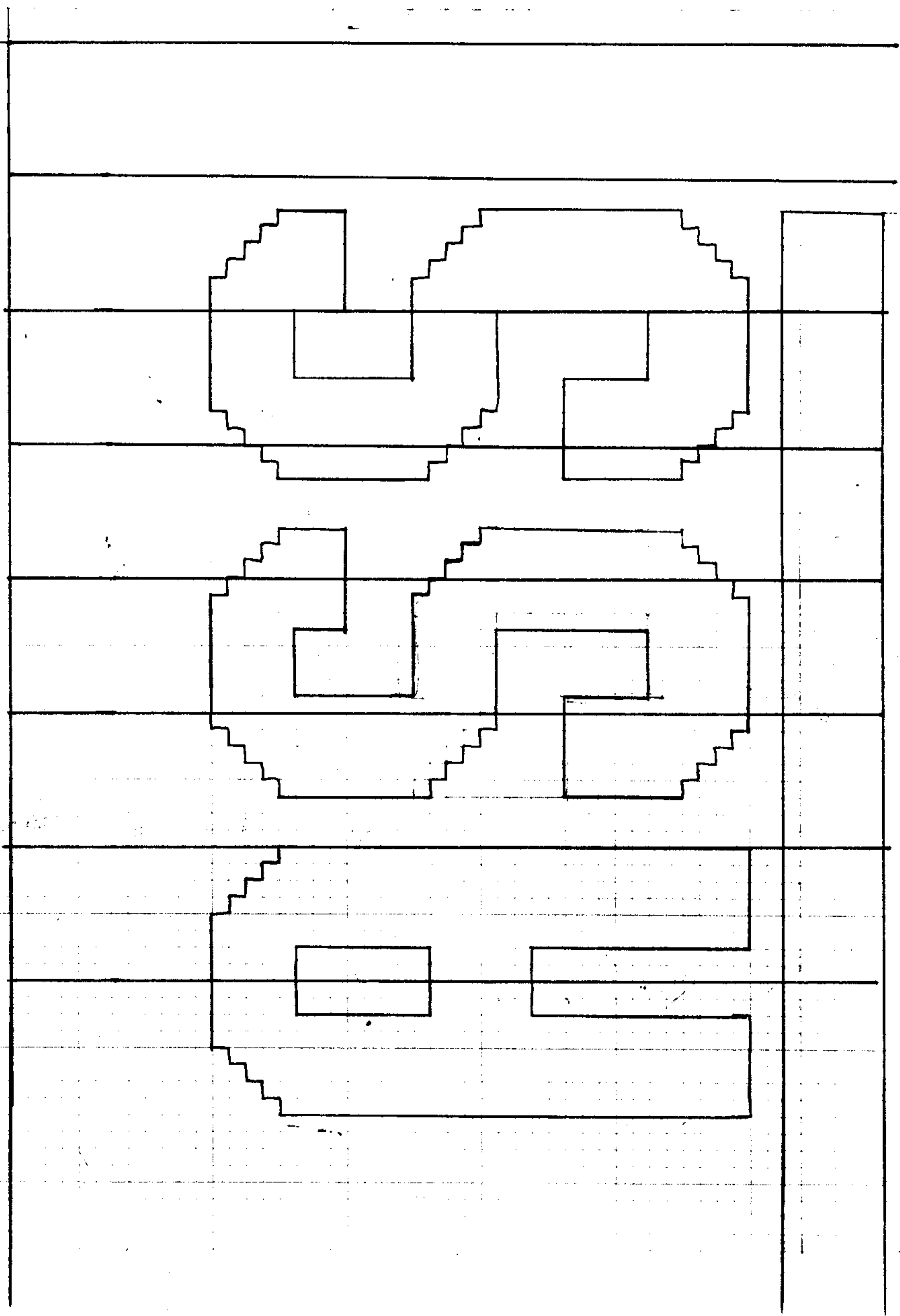


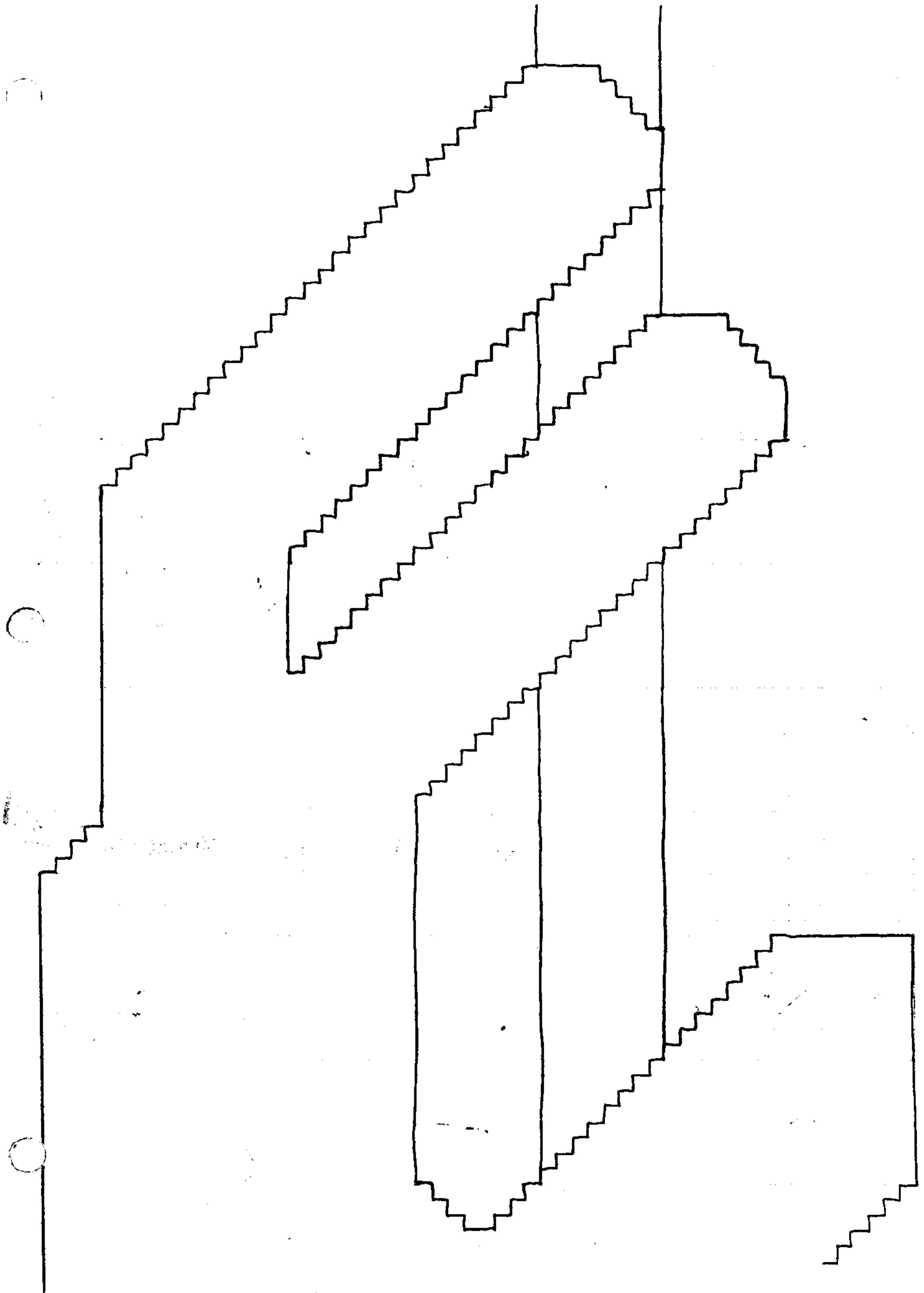
| | |
|---------------------|------------|
| PROJECT NAME | DESIGNER |
| CARTRIDGE TITLE | PROGRAMMER |
| GAME/ACTIVITY TITLE | REMARKS |
| SEQUENCE | |

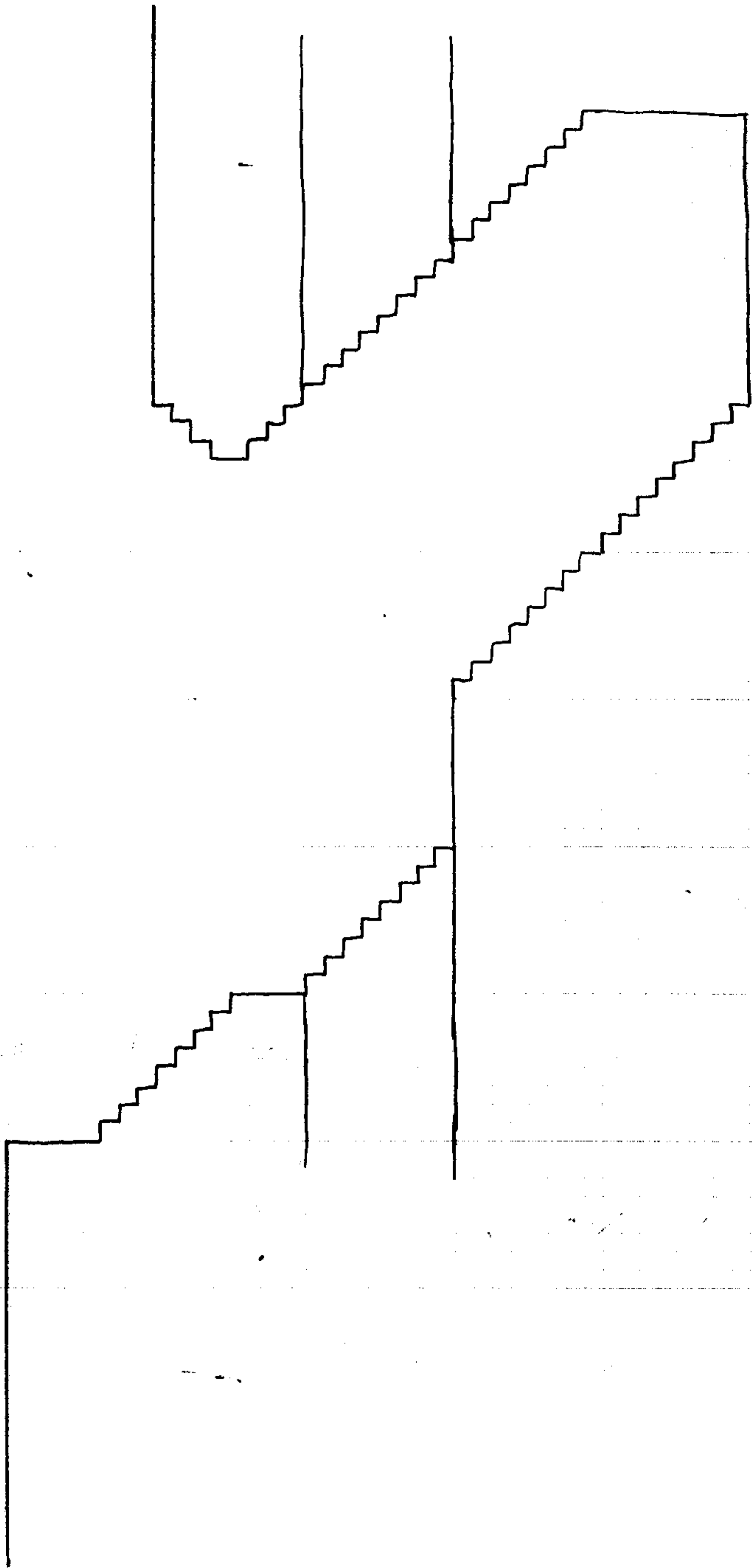
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

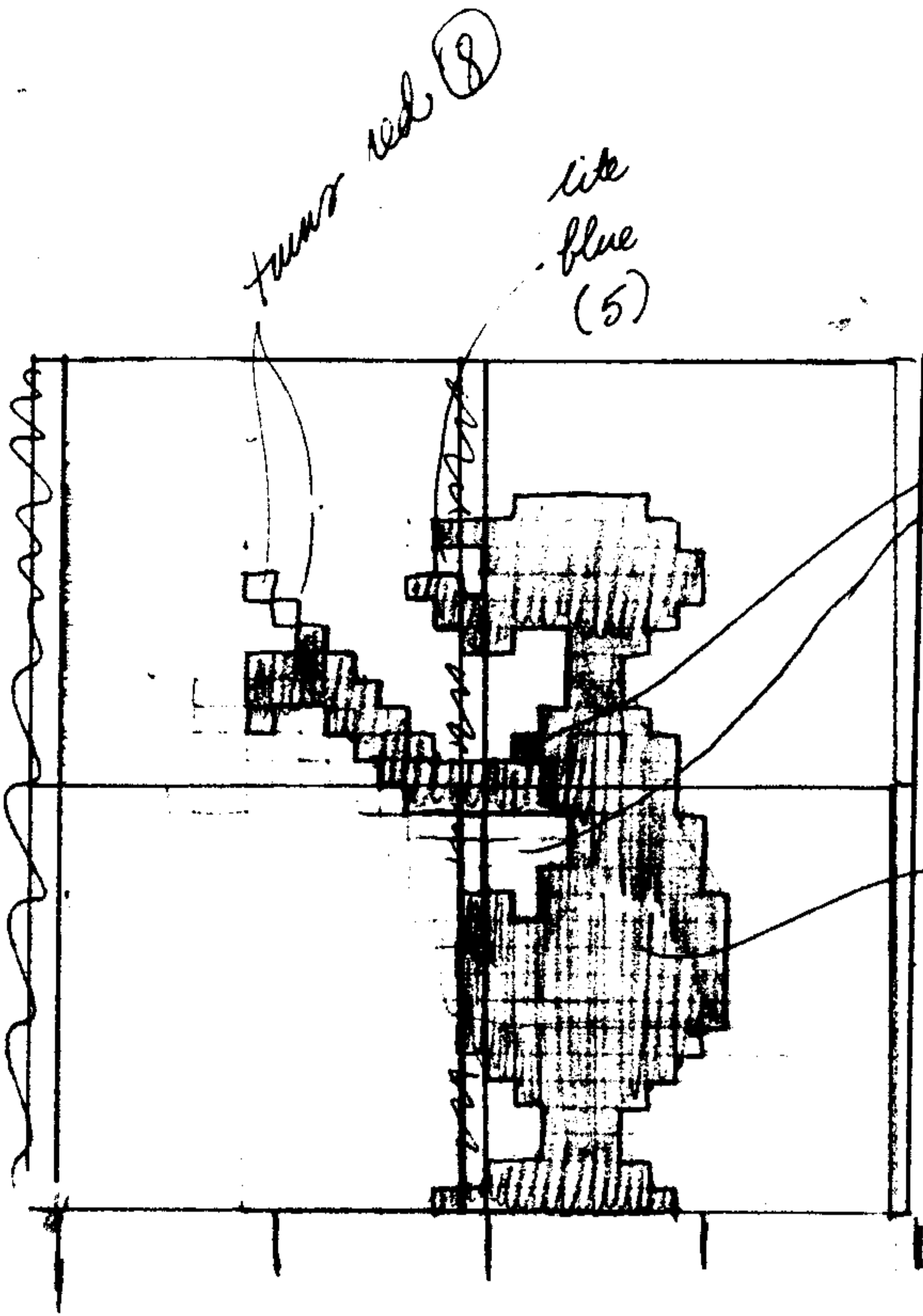
DESCRIPTION











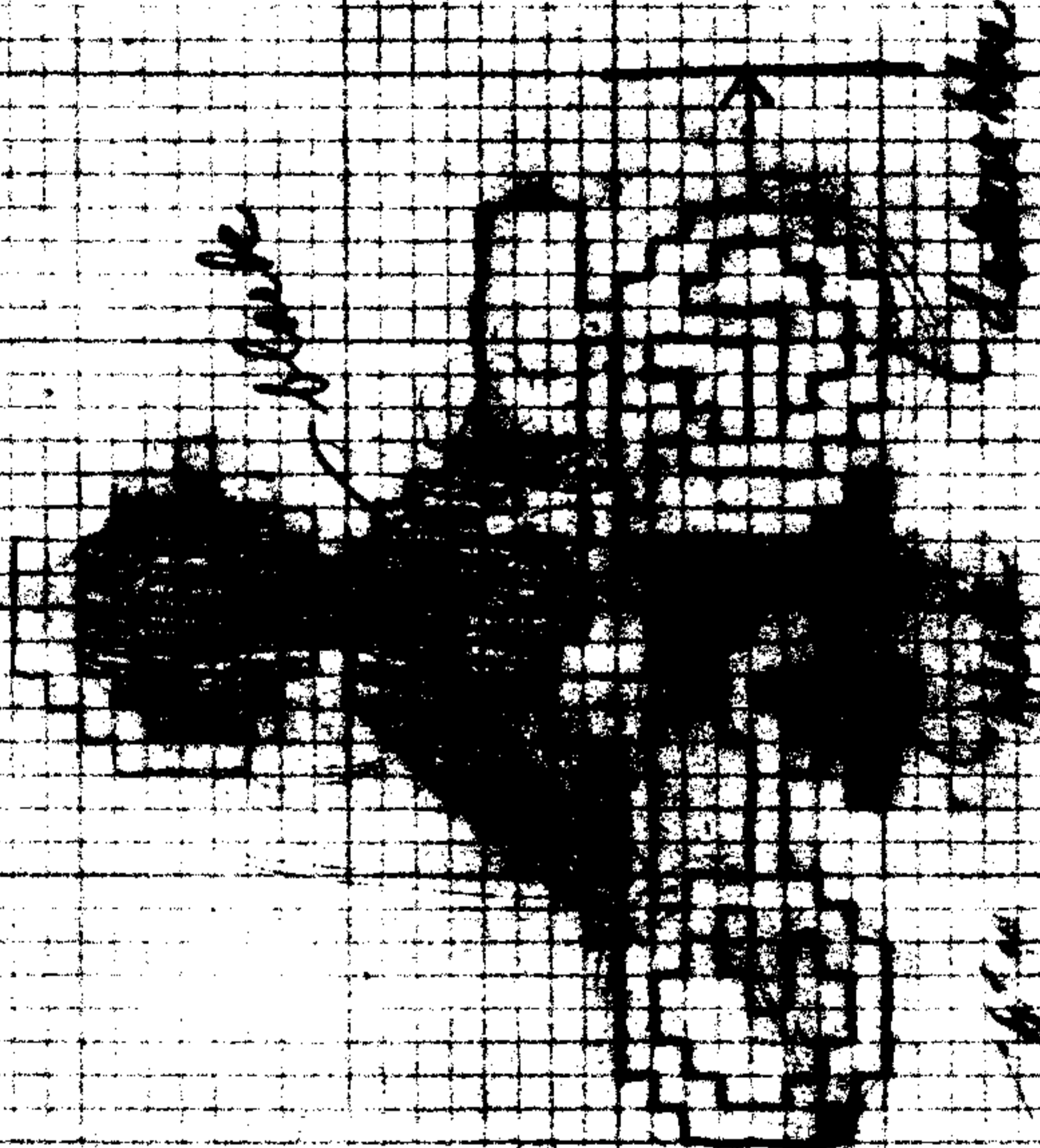
turns red (8)

like blue (5)

heart light turns red (8)

E.T. = gray on

black silhouette



ground

03 03 03 03
03 03 03 03
03 03 03 03

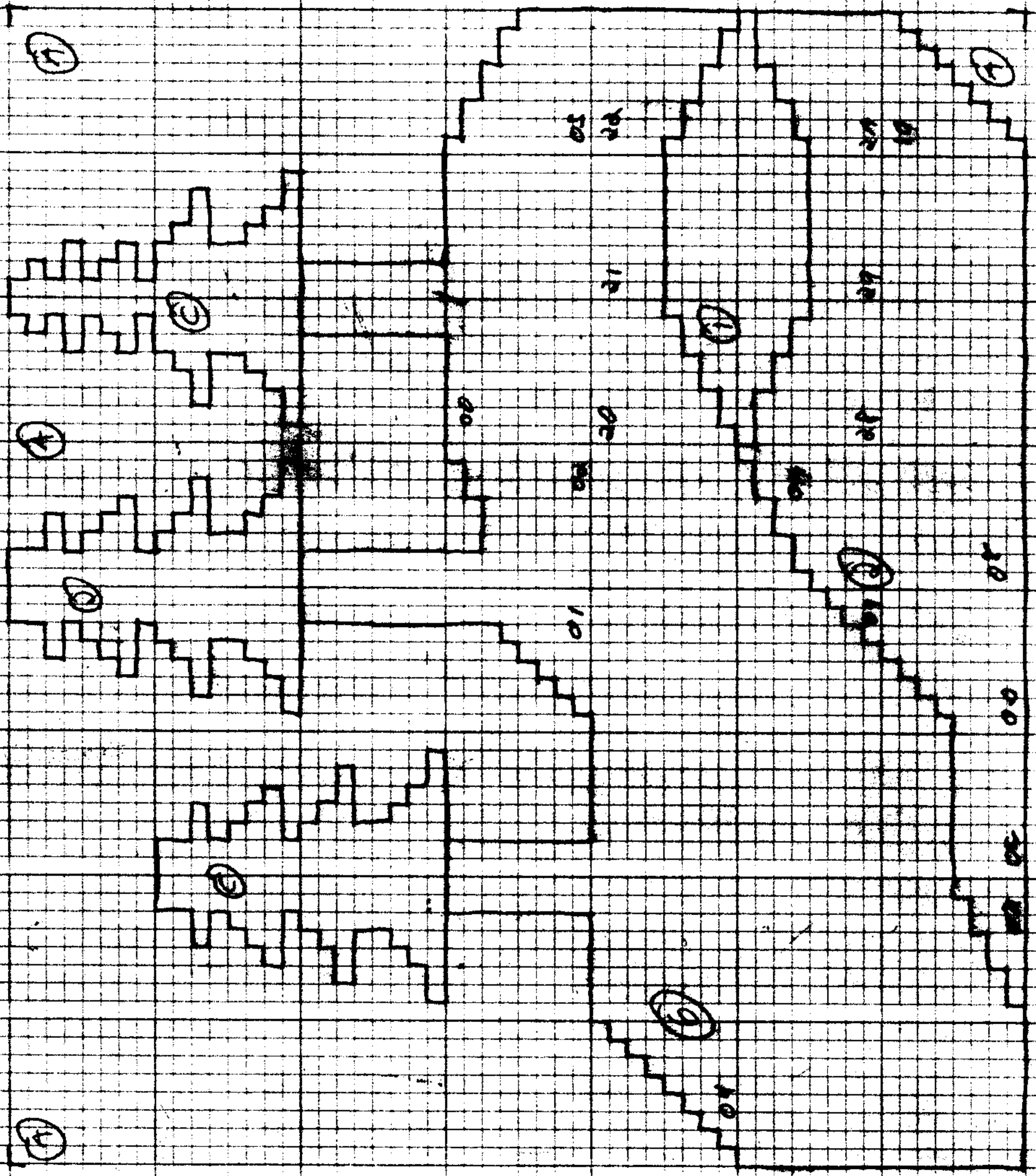
13 03

03 03 03 03
03 03 03 03
03 03 03 03



1/15

5/6/1



①

①

②

③

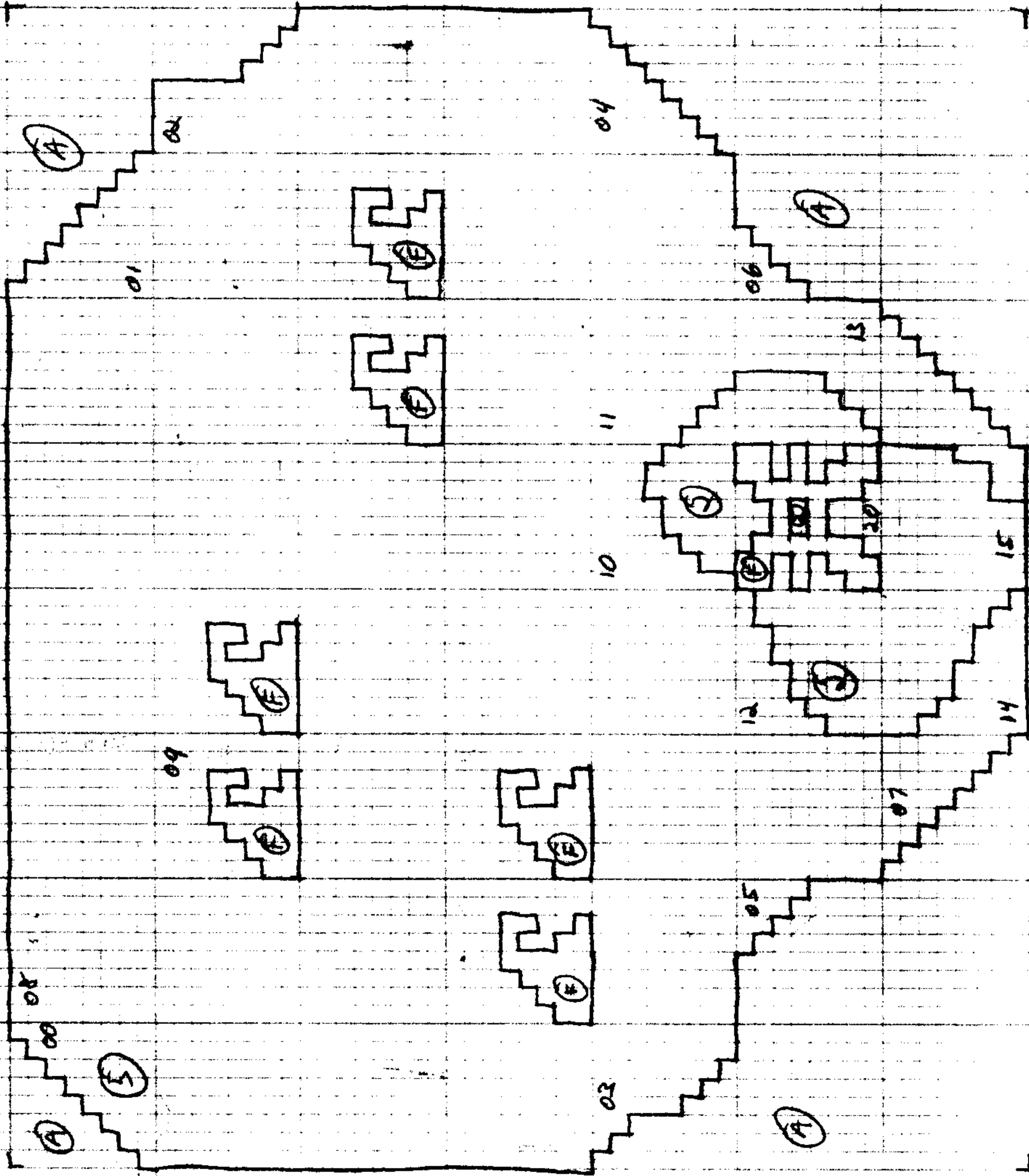
④

⑤

⑥

⑦

⑧



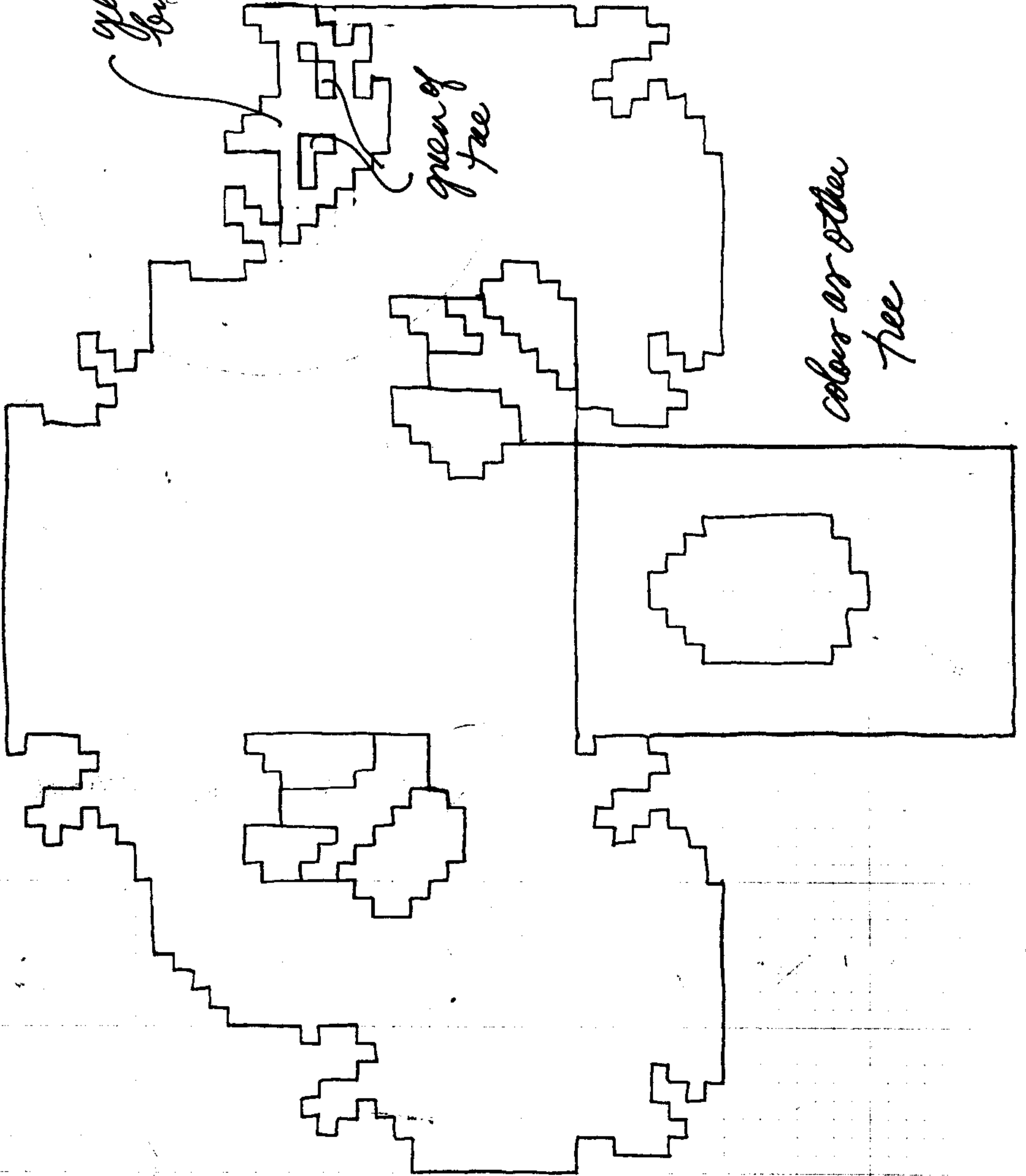
yellow of too
bright of
yellow 2

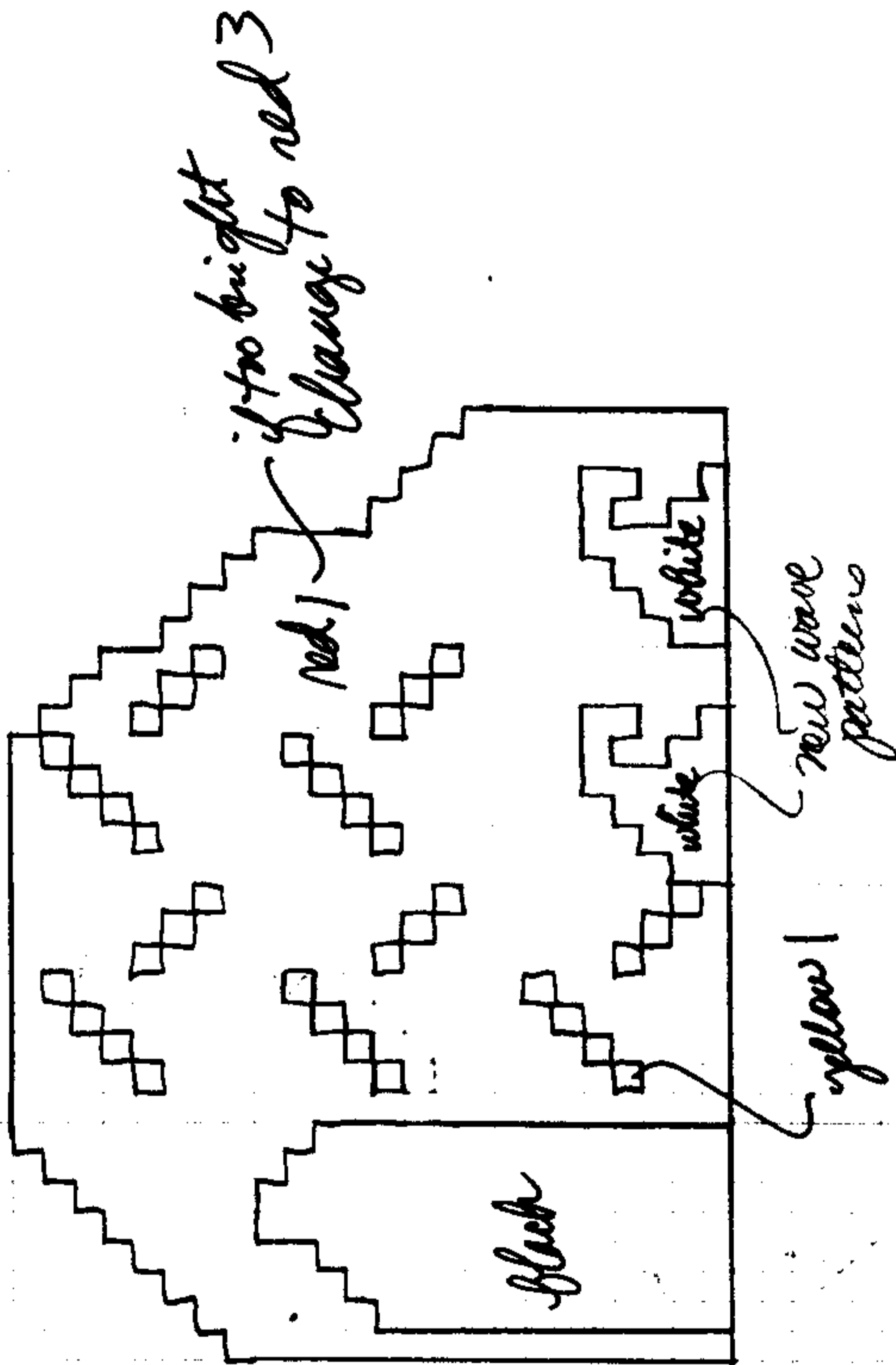
nest

red 3

green of
tree

colour as other
tree





if too bright
change to red 3

red

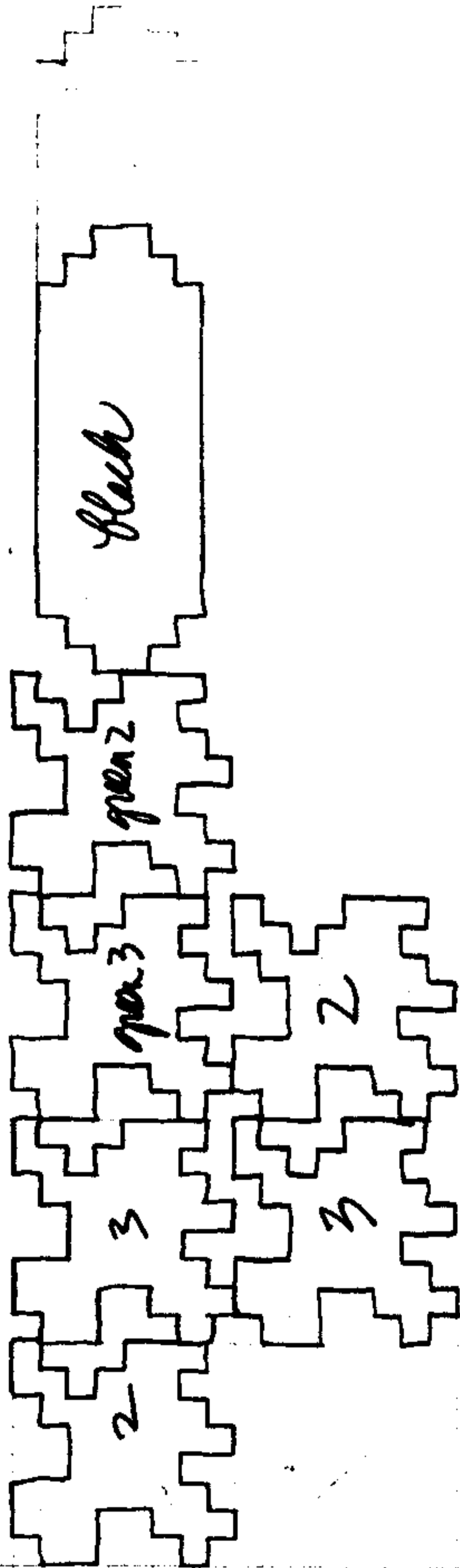
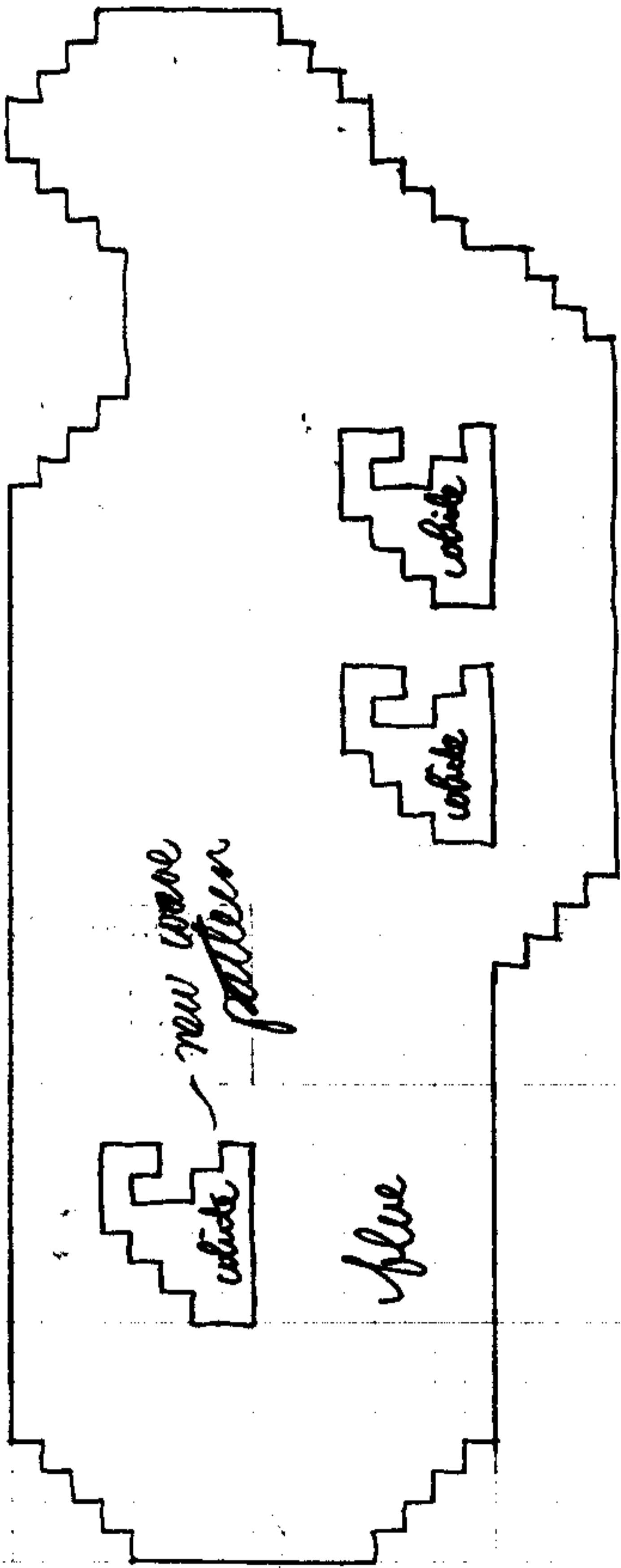
white

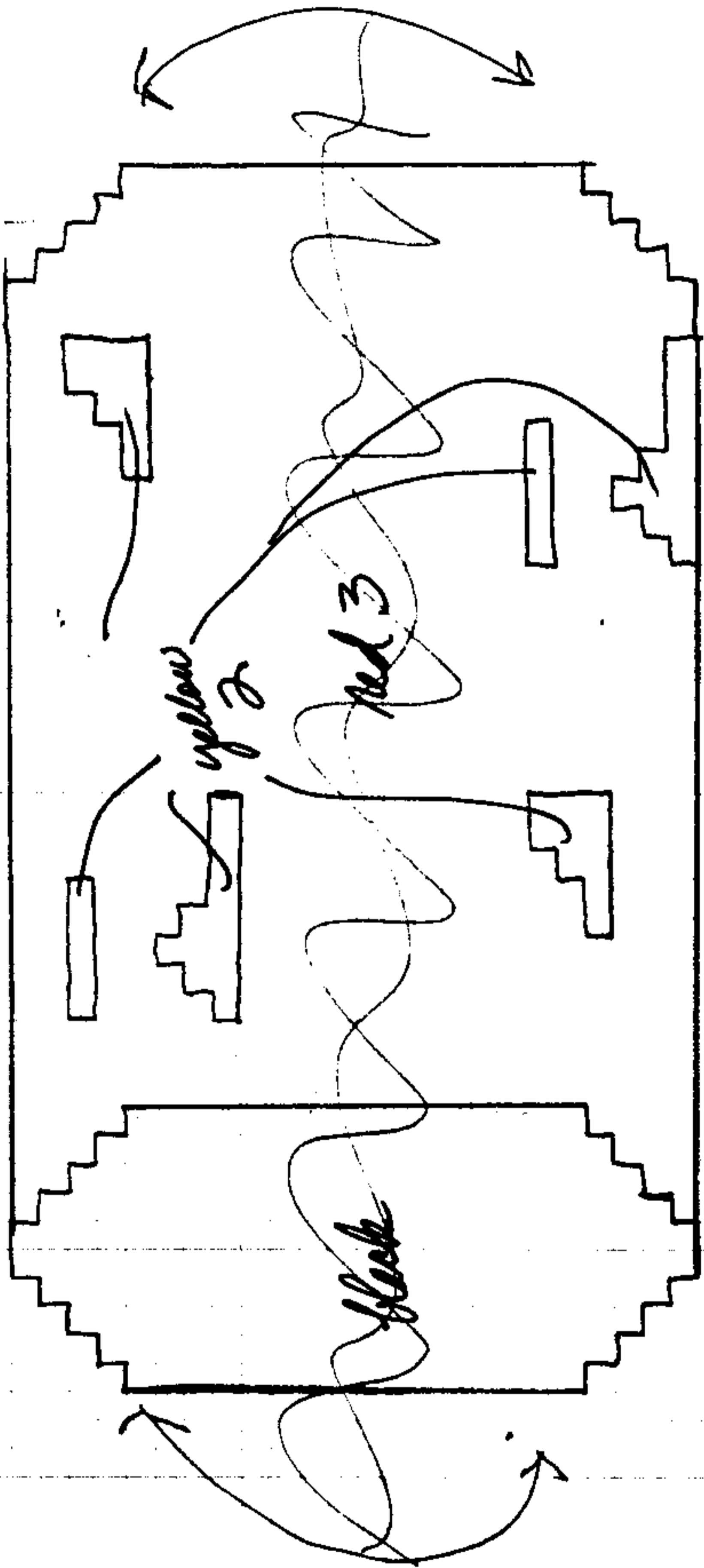
white

black

yellow

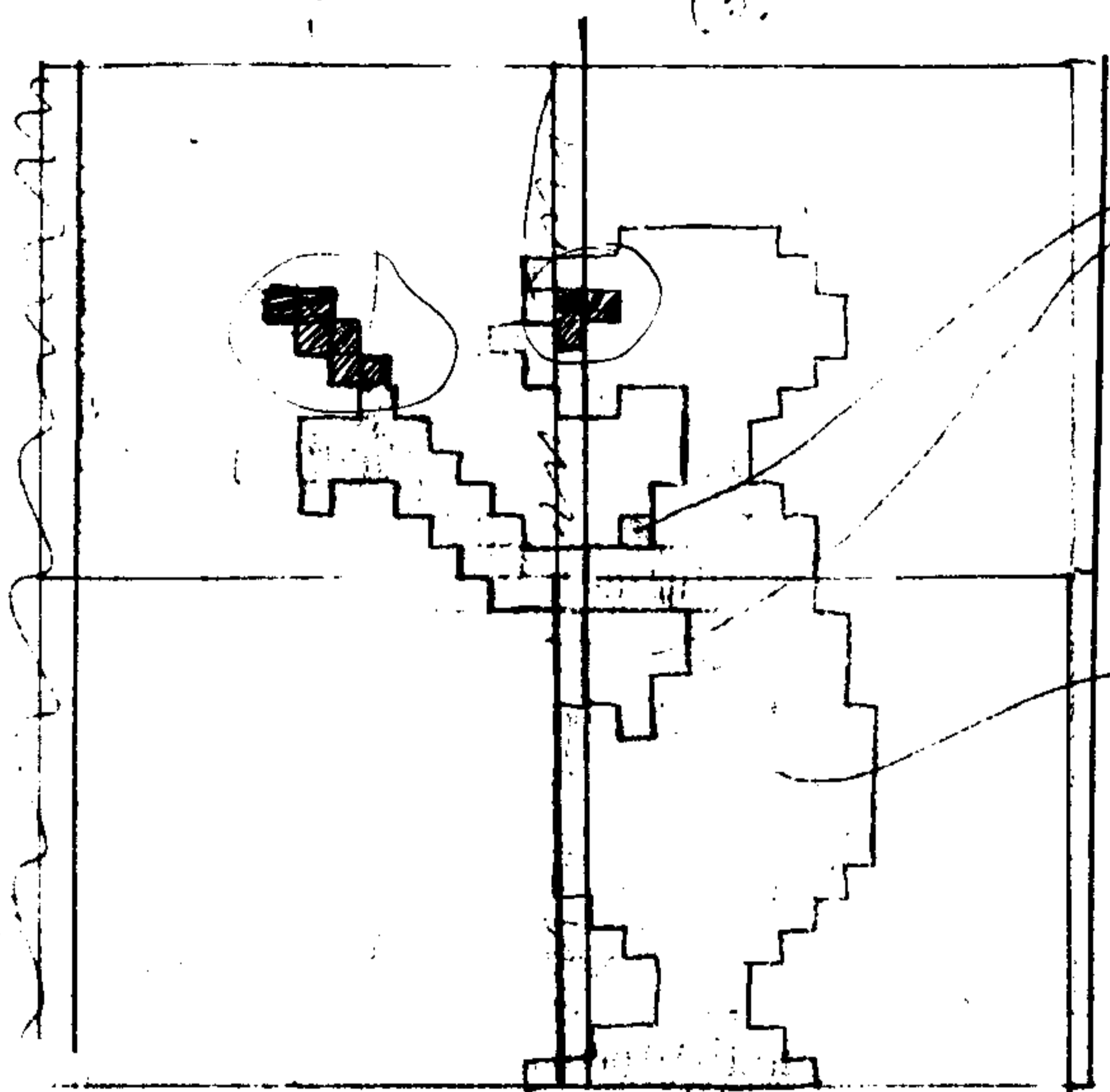
new wave
patterns





TURNING 1000

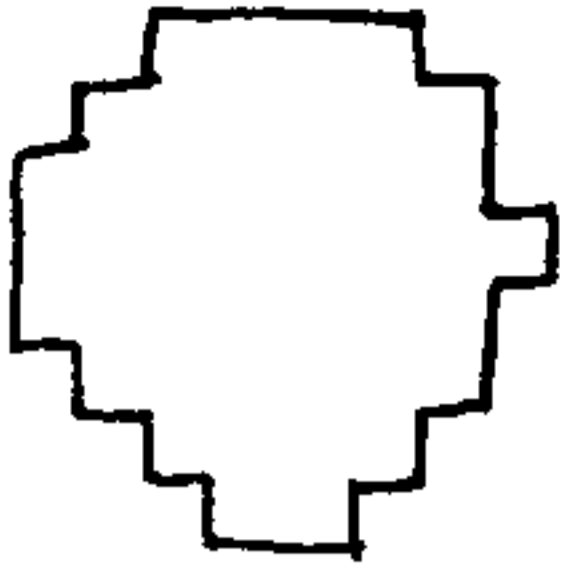
1.5
- blue
(5)



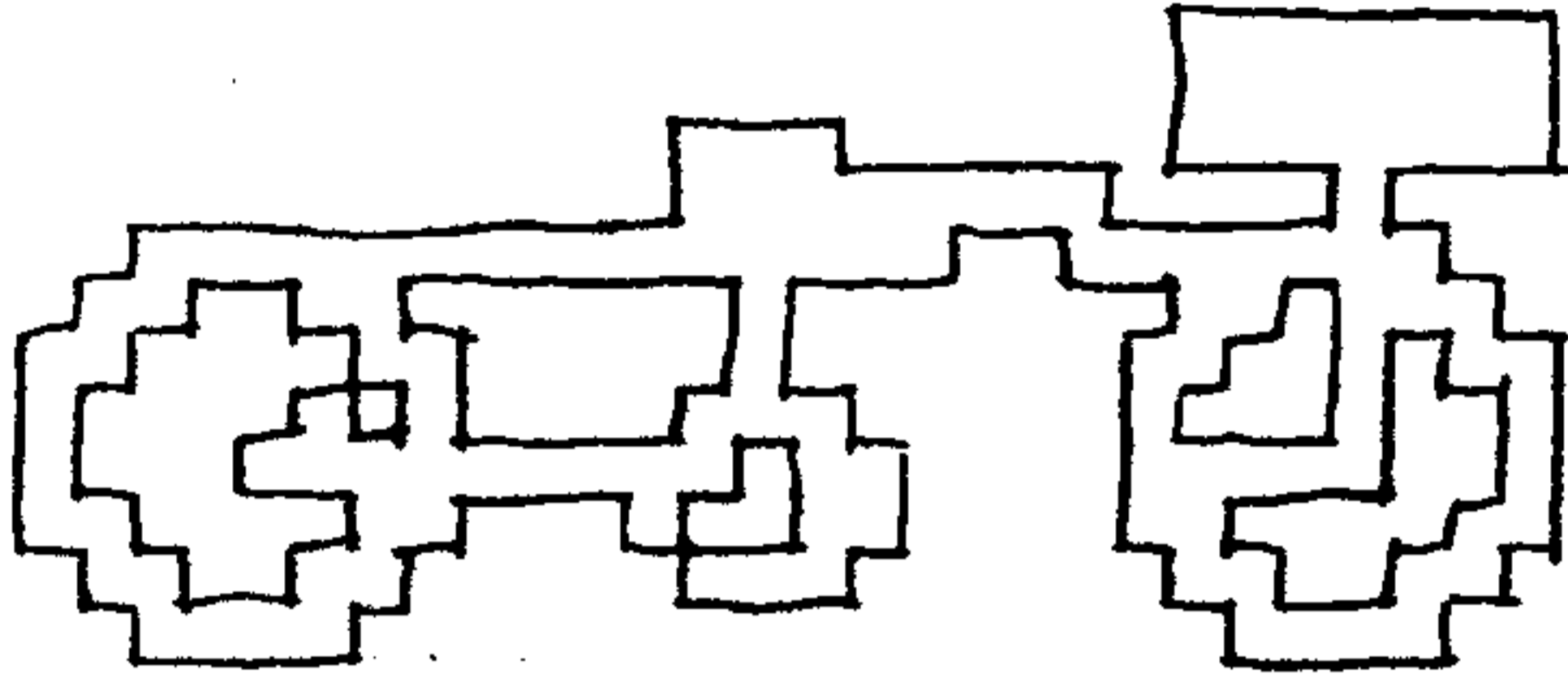
heart light
turn
red (S)

E.T. =
gray
OR

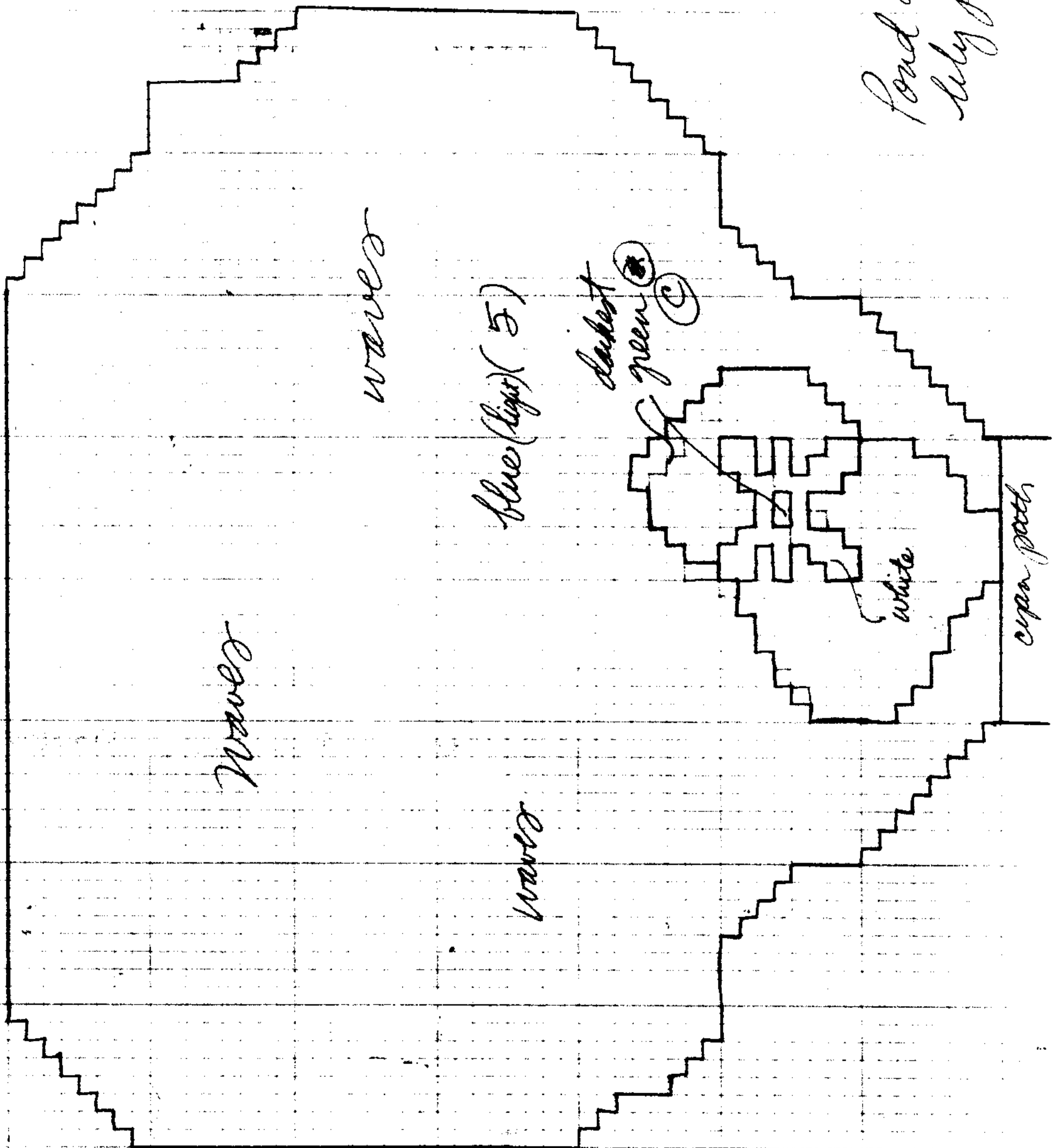
black
silhouette



EP



EP EP EA EC
EB ED



cement

water

blue (light) (5)

darkest green

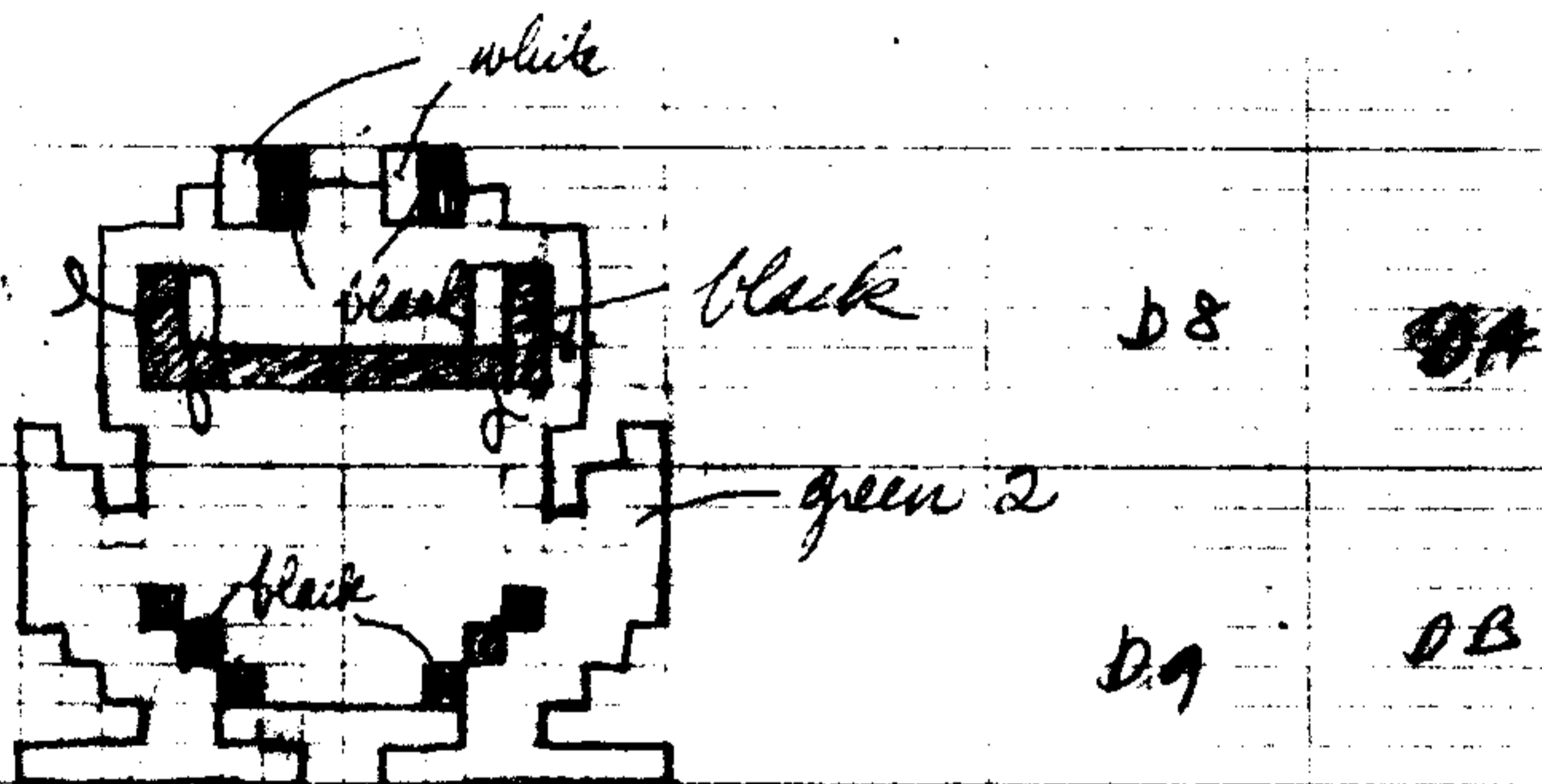
3

2

white

road with
duty pad

open path

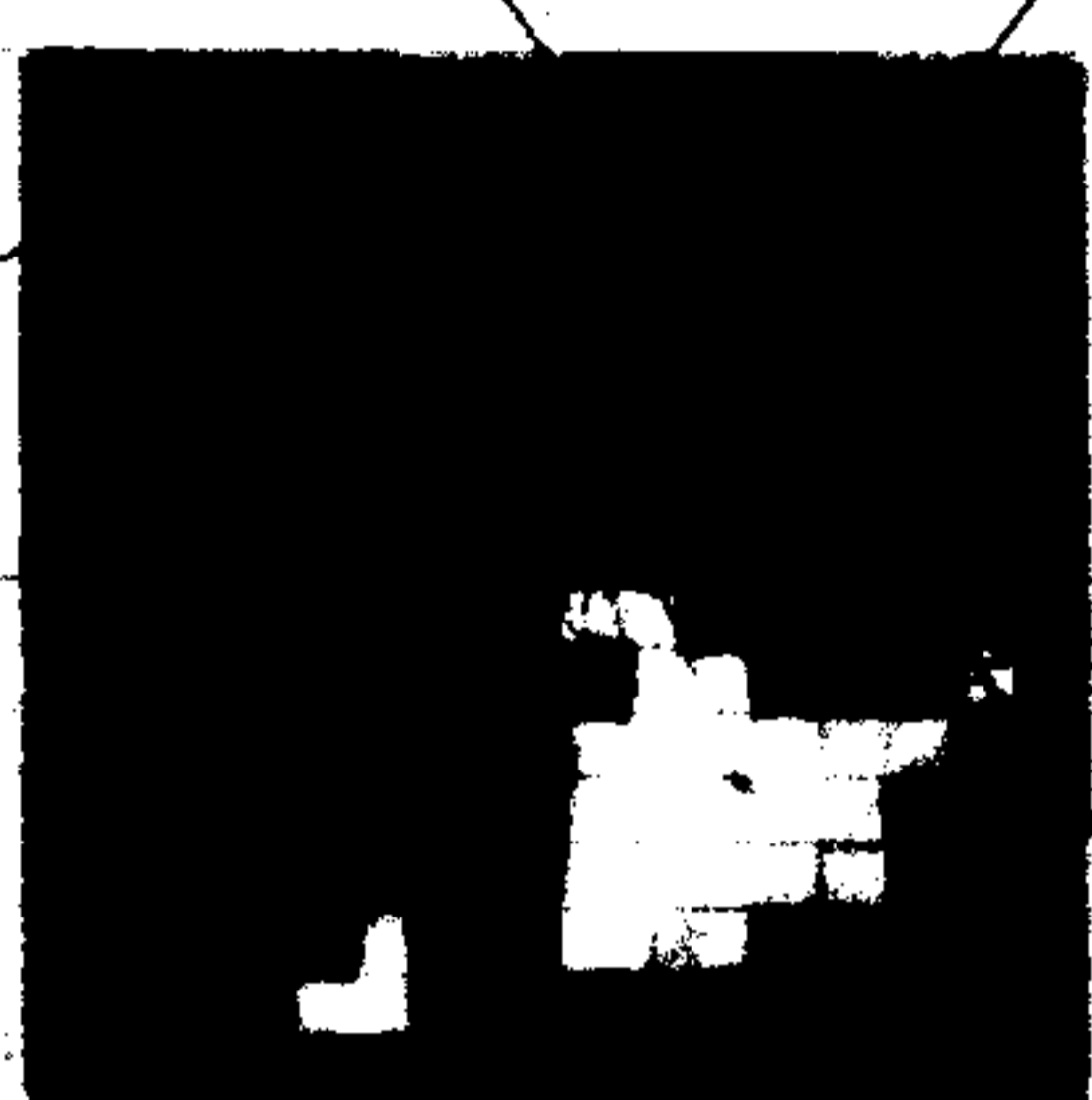


NOT NOW
Cyan PATH
GRAY

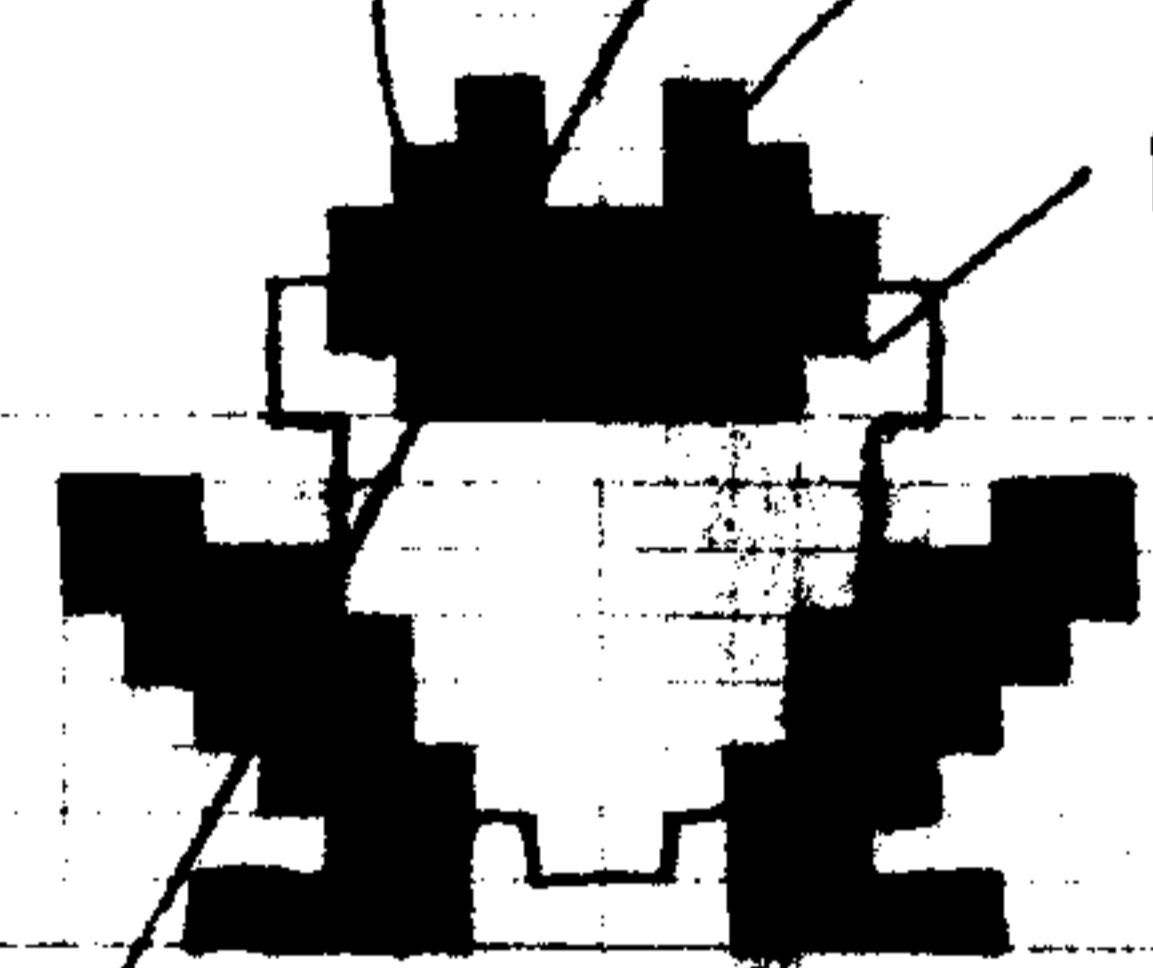
green

blk

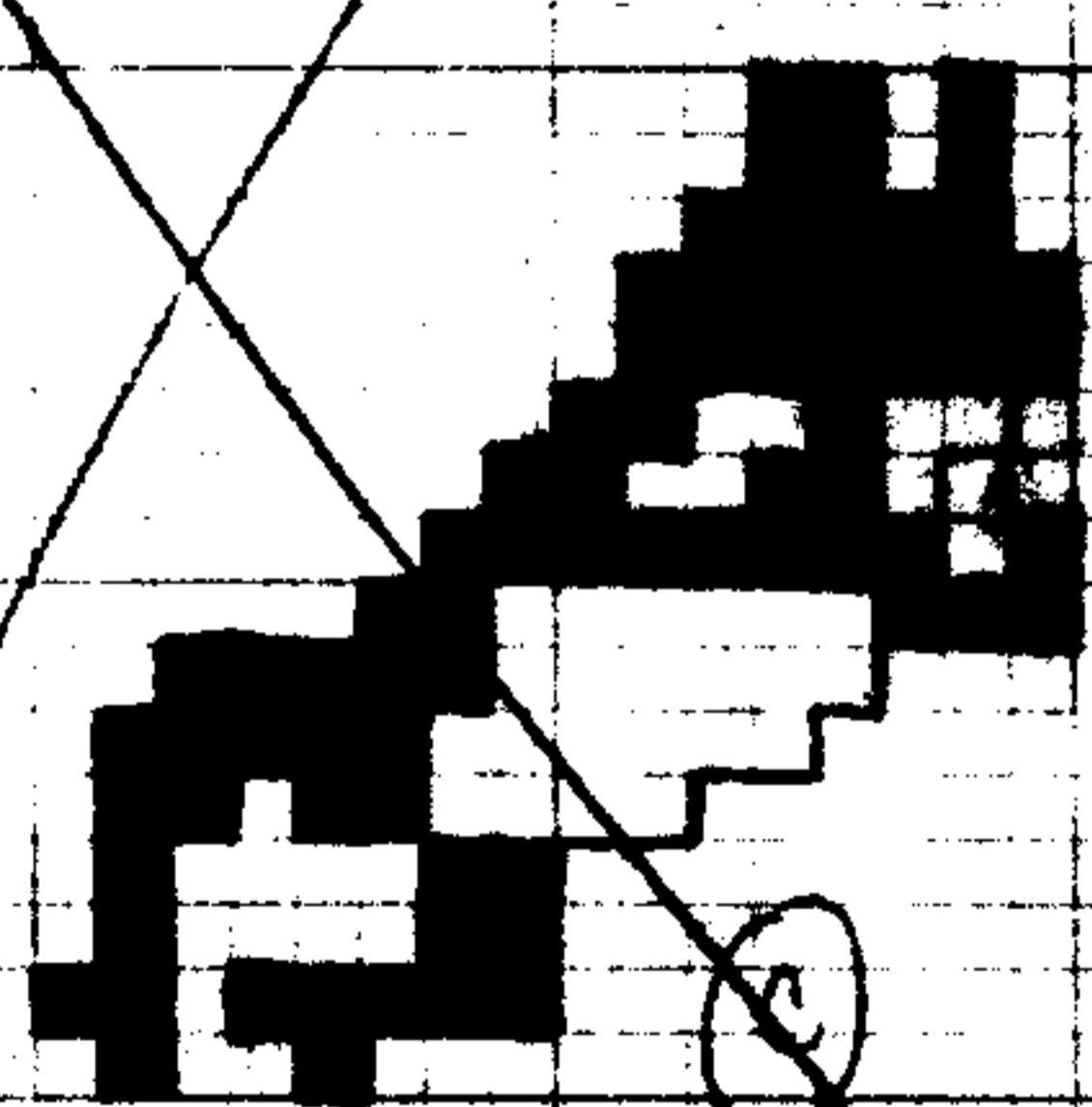
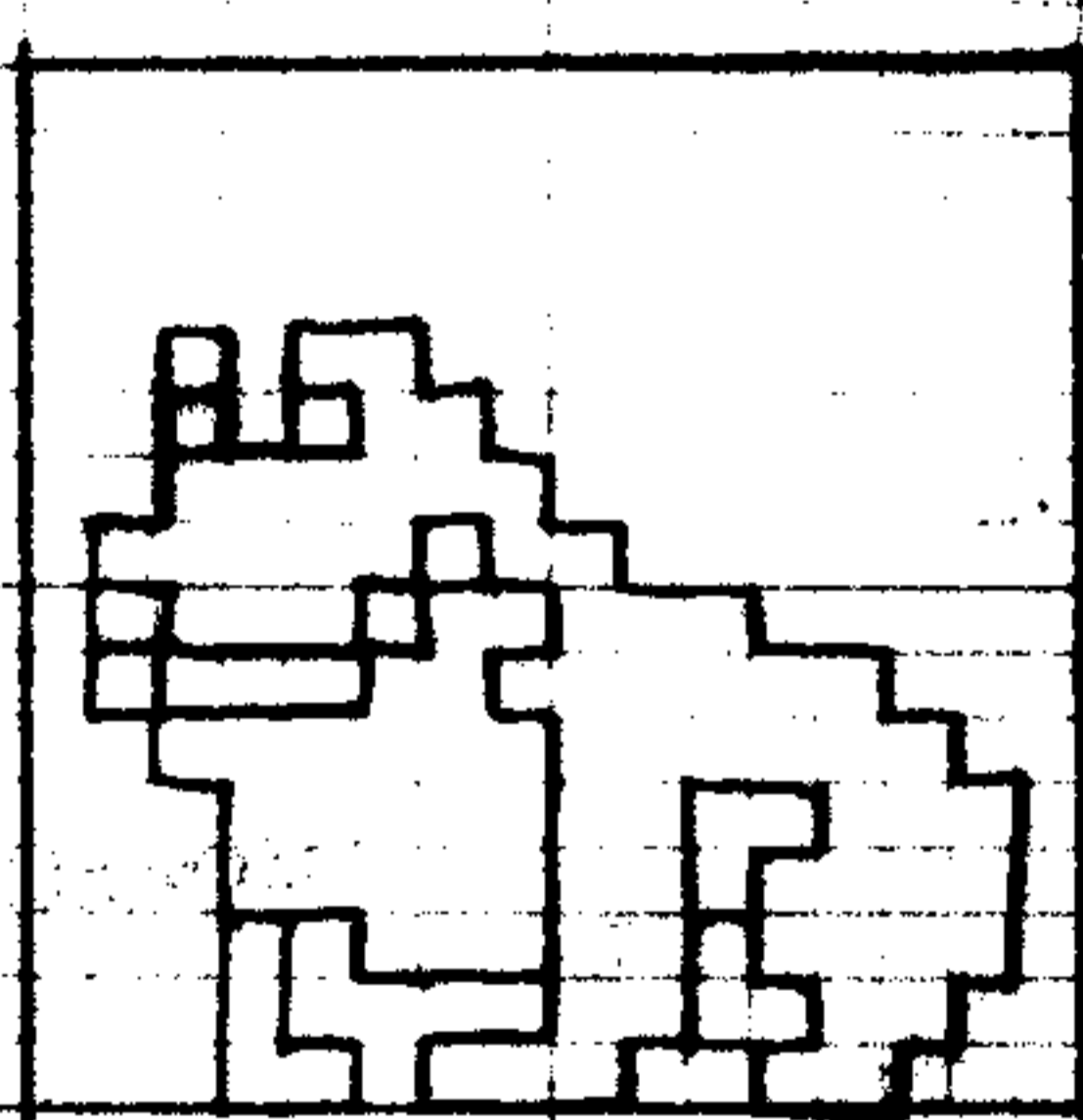
white



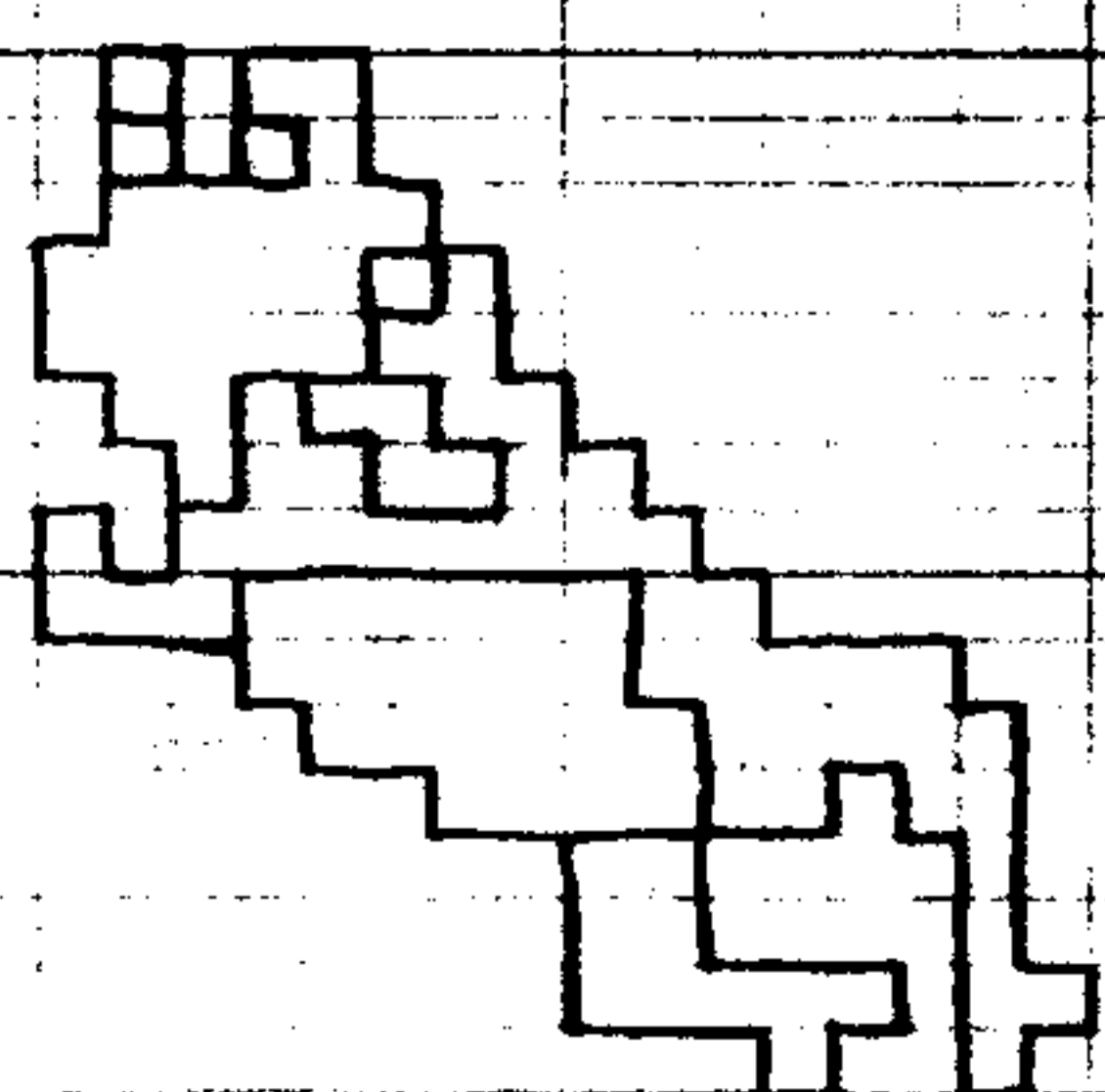
(A)



(B)

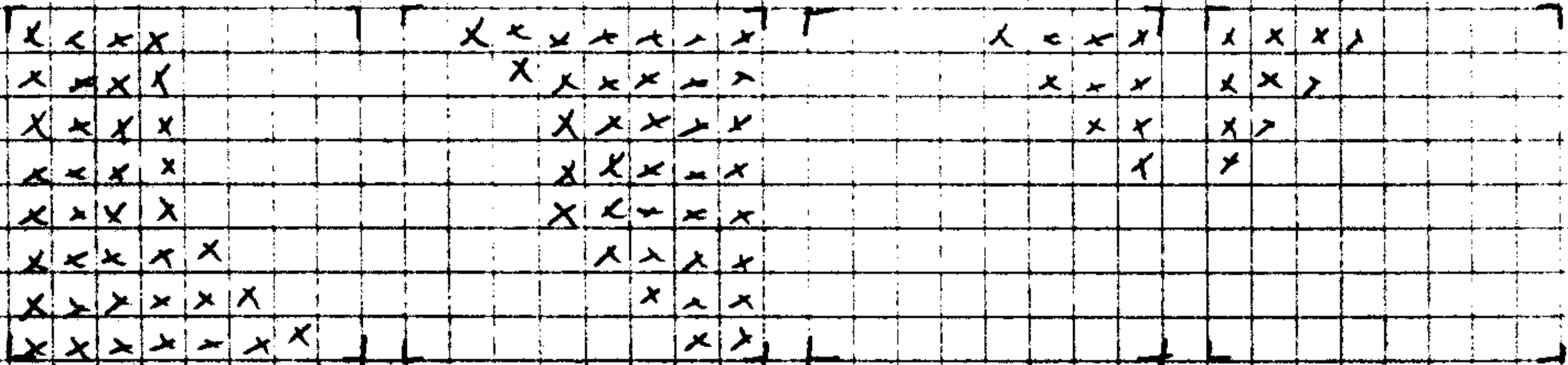
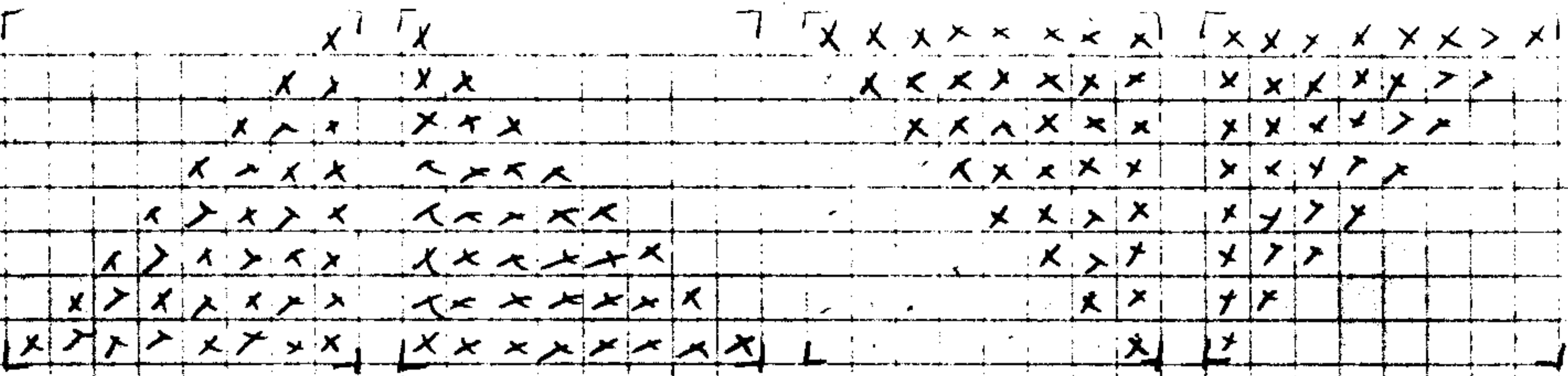


(C)



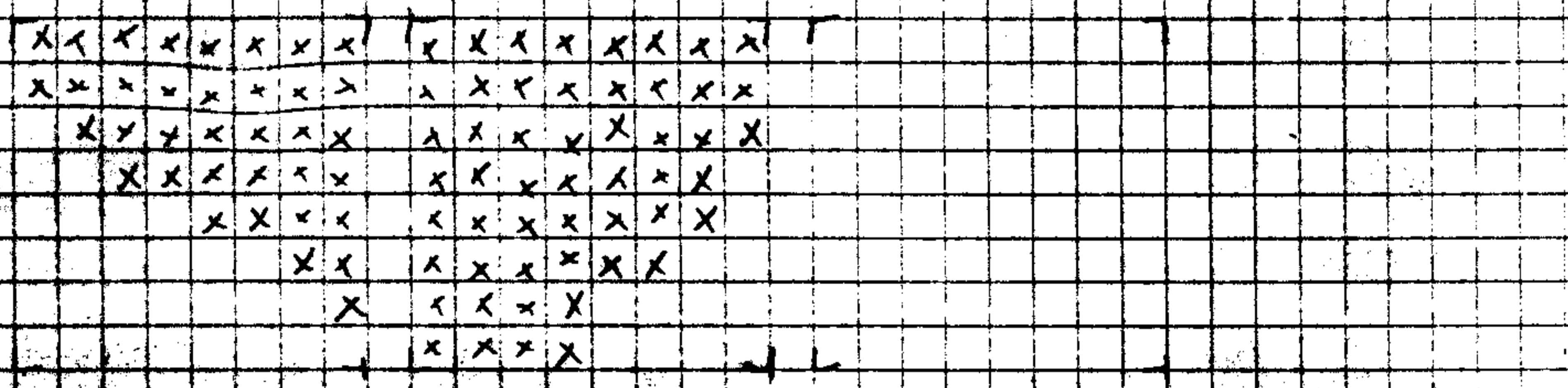
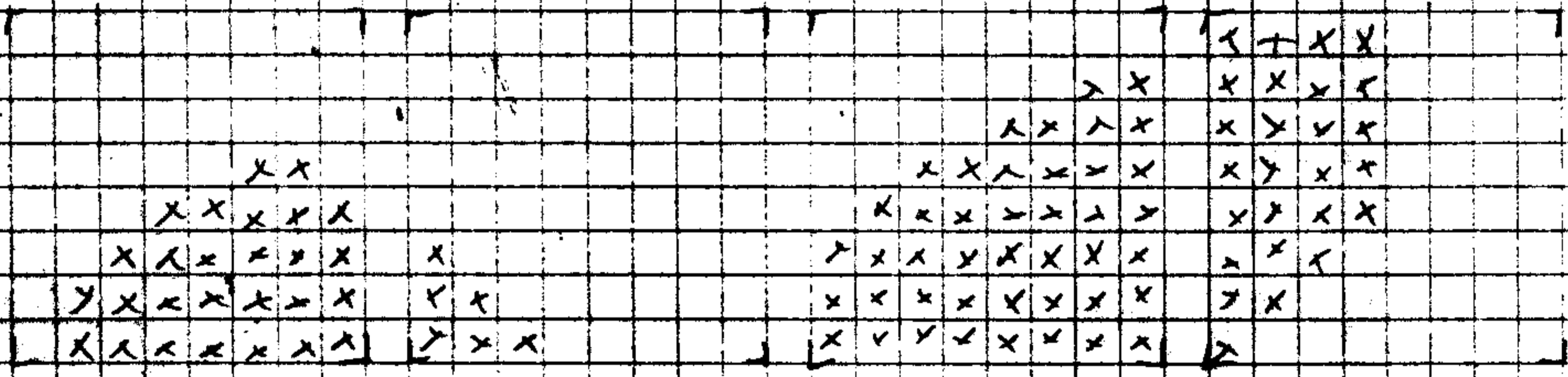
BLUE

YELLOW



GREENS

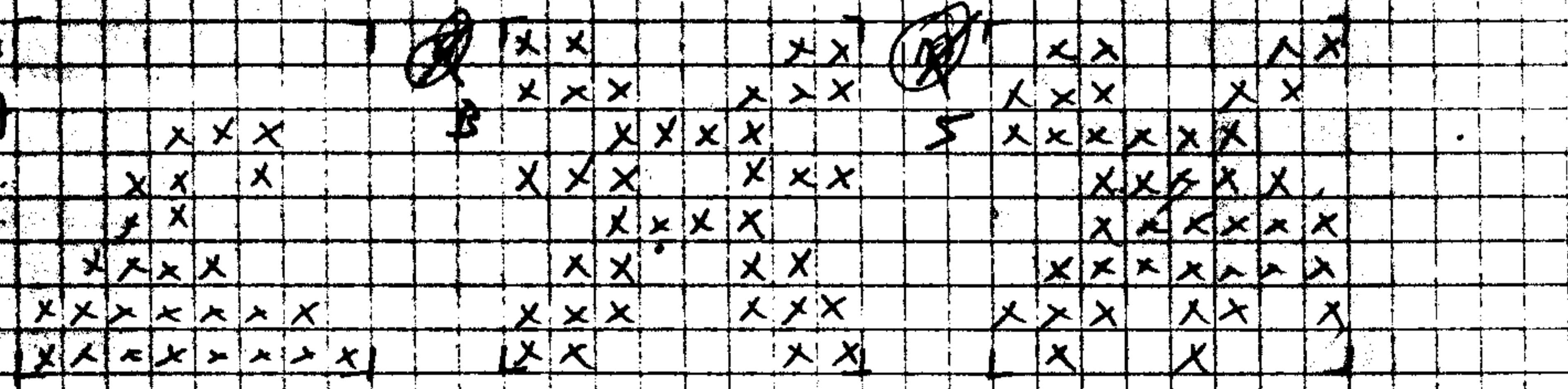
YELLOW



A

B

S



WHITE/BLUE

WHITE/GREEN

GREENS/YELLOW

LAKE

WHITE

GRAY

1

13

| | | | | | |
|---|---|---|---|---|---|
| | | | | X | |
| | | | X | X | |
| | | X | X | X | X |
| X | X | X | X | X | X |

BLUE

GRAY

14

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | X | X | X | X | X | |
| | | | X | X | X | X | X | X | X |
| | | X | X | X | X | X | X | X | X |
| X | X | X | X | X | X | X | X | X | X |

BLACK

GRAY

15

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | X | X | X | X | X | X | X | X | X | X |
| | X | X | X | X | X | X | X | X | X | X |
| | X | X | X | X | X | X | X | X | X | X |
| | X | X | X | X | X | X | X | X | X | X |
| | X | X | X | X | X | X | X | X | X | X |
| X | X | X | X | X | X | X | X | X | X | X |

BLACK

BEVEL

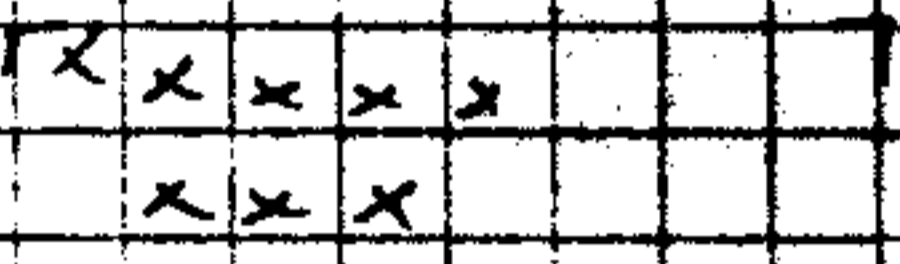
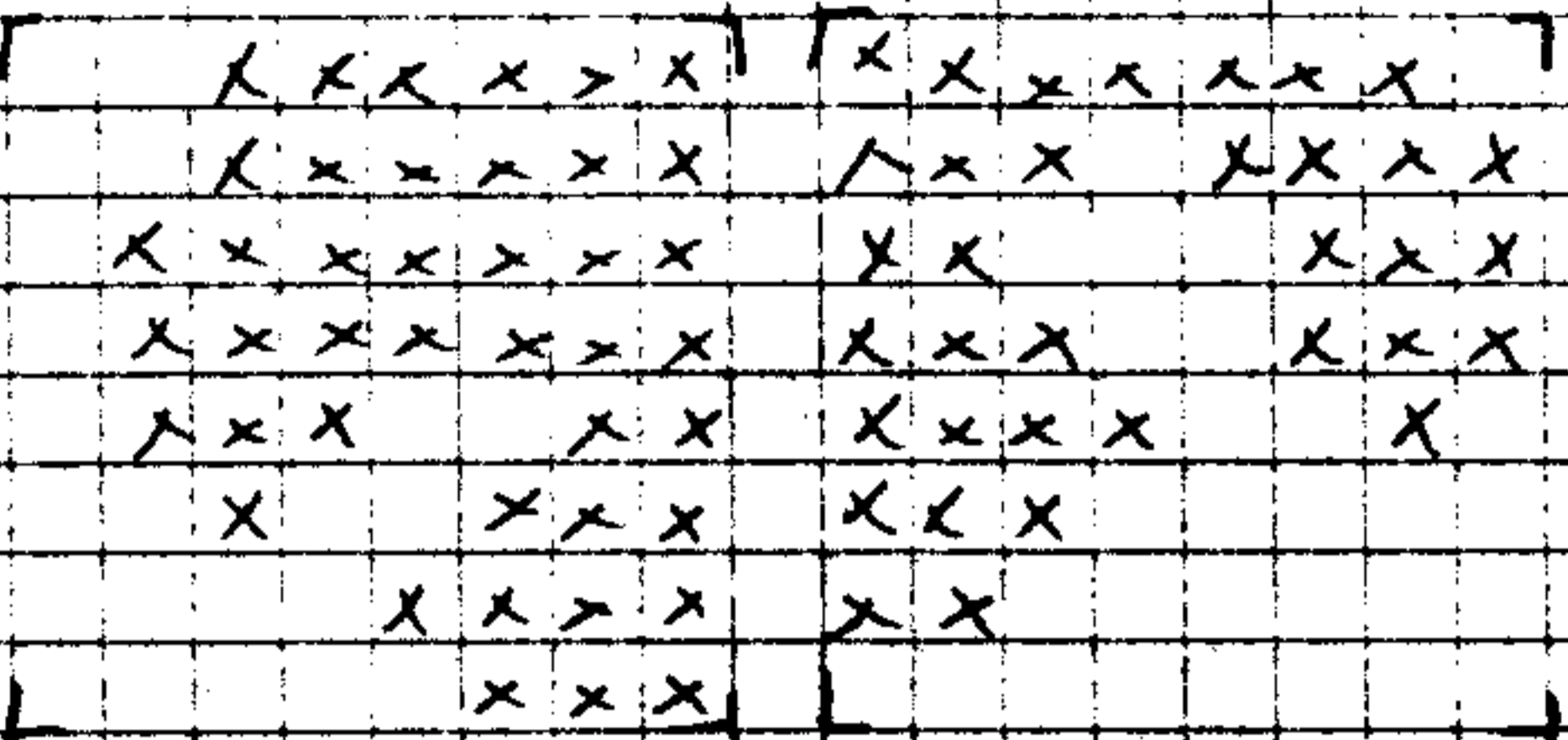
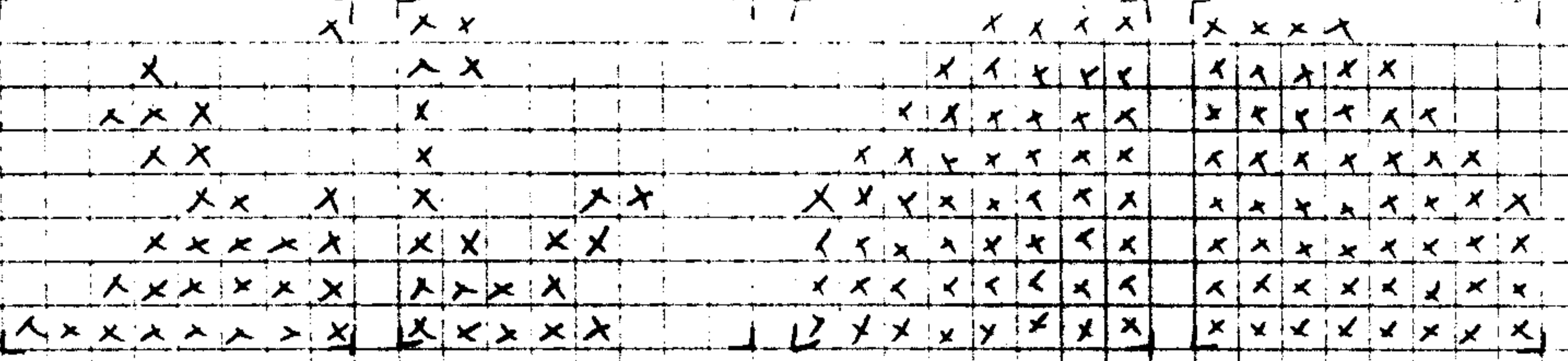
16

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|--|
| X | | | | | X | X | X | X | |
| X | X | | | | X | X | X | X | |
| X | X | X | | | X | X | X | X | |
| X | X | X | X | | X | X | X | X | |
| X | X | X | X | X | X | X | X | X | |
| X | X | X | X | X | X | X | X | X | |

CAVE

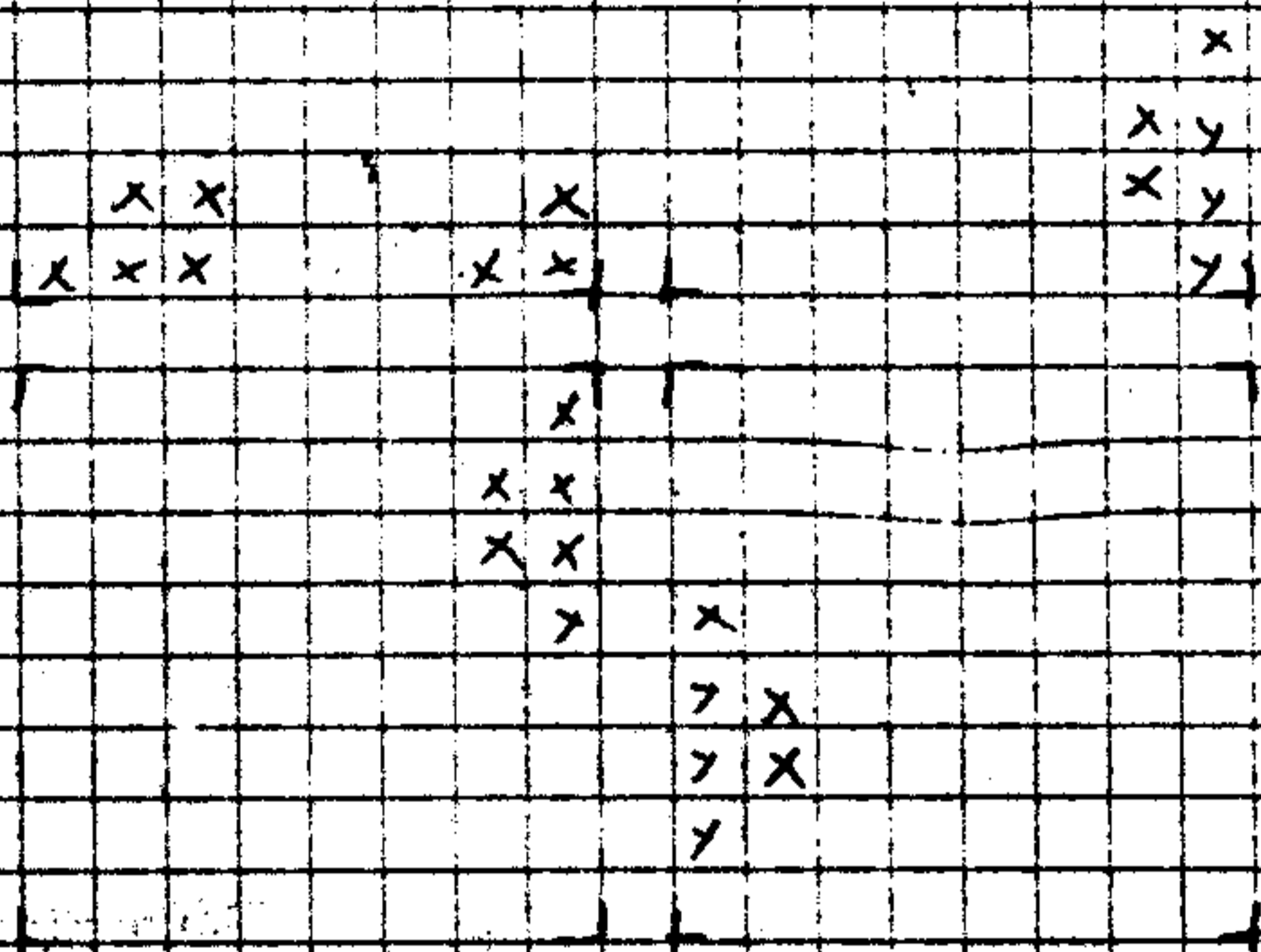
GREEN

YELLOW



YELLOW

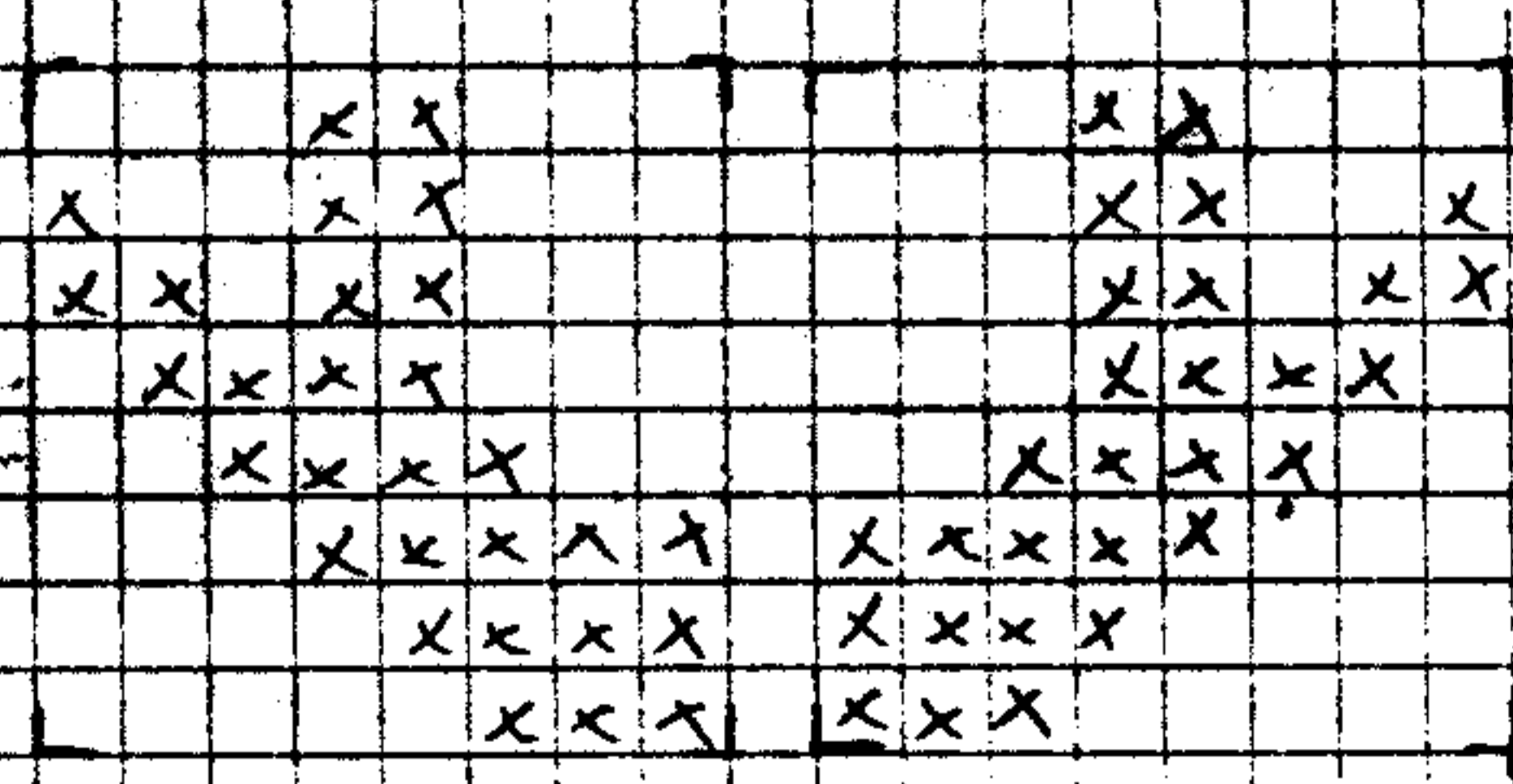
GREEN



RED

YELLOW

?



TREE

GREENS

X X X X X X X

GREENS

X X X X X X X

(X) F

X X X X X

X X X X X

X X X X X

X X X X X

X X X

X X X X

X X X X

GREENS

X X X X X

X X X X X X X

X X X X X X X

GRAY

X X X X X X X

X X X X X X X

X X X X X X X

X X X X X

X X X X X

X X X X X X X

X X X X X X X

X X X X X X X

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X X X X X X X

X X X X X X X

X X X X X X X

X X X X X X X

GREENS

X X X X X X X

X X X X X X X

GRAY

X X X X X X X

X X X X X X X

X X X X X X X

X X X X X X X

X X X X X X X

X X X X X X X

X X X X X X X

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X X X X X X X

X X X X X X X

X X X X X X X

X X X X X X X

X X X X X X X

X X X X X X X

X X X X X X X

REAL

X X

GRAY

X X

X X

(X) F

X X

CAVE

BLACK T

RED

(circled)

~~RE~~

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | X | | X | |
| | | X | X | | X | X |
| | X | X | X | | X | X |
| X | X | X | X | X | X | X |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| X | X | X | X | X | X | X | X |
| X | X | X | X | X | X | X | X |
| X | X | X | X | X | X | X | X |
| X | X | X | X | X | X | X | X |
| X | X | X | X | X | X | X | X |
| X | X | X | X | X | X | X | X |
| X | X | X | X | X | X | X | X |
| X | X | X | X | X | X | X | X |

TREE

LAND (for ~~CEA~~ ^{Catalog})

①

SET: >00
CLR: >74

SET: >01
CLR: >4A

SET: >02
CLR: >9A

SET: >03
CLR: >6A

| | | | | | | | | | | | |
|-----|-------|-------|-----|-------|---------|-----|-------|-------|-----|-------|----------|
| >00 | >0800 | Block | >08 | >0840 | Shadows | >10 | >0880 | Tree | >18 | >08C0 | Tree |
| >01 | >0808 | | >09 | >0848 | | >11 | >0888 | Trunk | >19 | >08CB | Trunk |
| >02 | >0810 | Arind | >0A | >0850 | ↓ | >12 | >0890 | DCM | >1A | >08D0 | |
| >03 | >0818 | Area | >0B | >0858 | VOID | >13 | >0898 | | >1B | >08DB | Branches |
| >04 | >0820 | | >0C | >0860 | Shadows | >14 | >08A0 | | >1C | >08E0 | nest |
| >05 | >0828 | LOCK | >0D | >0868 | | >15 | >08A8 | | >1D | >08EB | |
| >06 | >0830 | | >0E | >0870 | | >16 | >08B0 | | >1E | >08F0 | |
| >07 | >0838 | | >0F | >0878 | | >17 | >08B8 | | >1F | >08FB | |

SET: >04
CLR: >2A

SET: >05
CLR: >CA

SET: >06
CLR: >00

SET: >07
CLR: >5A

| | | | | | | | | | | | |
|-----|-------|-------|-----|-------|-------|-----|-------|----------|-----|-------|-------|
| >20 | >0900 | Tree | >28 | >0940 | Tree | >30 | >0980 | WPAK | >38 | >09C0 | WPAK |
| >21 | >0908 | | >29 | >0948 | | >31 | >0988 | (Ground) | >39 | >09CB | |
| >22 | >0910 | | >2A | >0950 | | >32 | >0990 | | >3A | >09D0 | |
| >23 | >0918 | | >2B | >0958 | | >33 | >0998 | | >3B | >09DB | Lakes |
| >24 | >0920 | | >2C | >0960 | | >34 | >09A0 | | >3C | >09E0 | |
| >25 | >0928 | | >2D | >0968 | | >35 | >09AB | | >3D | >09EB | |
| >26 | >0930 | Shrub | >2E | >0970 | Shrub | >36 | >09B0 | | >3E | >09F0 | |
| >27 | >0938 | | >2F | >0978 | | >37 | >09B8 | | >3F | >09FB | |

SET: >08
CLR: >5A

SET: >09
CLR: >C5

SET: >0A
CLR: >F5

SET: >0B
CLR: >F0

| | | | | | | | | | | | |
|-----|-------|------|-----|-------|--------|-----|-------|------|-----|-------|------|
| >40 | >0A00 | | >48 | >0A40 | Island | >50 | >0AB0 | Wave | >58 | >0AC0 | WPAK |
| >41 | >0A08 | Lake | >49 | >0A48 | | >51 | >0ABB | | >59 | >0ACB | |
| >42 | >0A10 | | >4A | >0A50 | | >52 | >0A90 | | >5A | >0AD0 | |
| >43 | >0A18 | | >4B | >0A58 | | >53 | >0A98 | | >5B | >0ADB | |
| >44 | >0A20 | | >4C | >0A60 | | >54 | >0AA0 | | >5C | >0AE0 | |
| >45 | >0A28 | | >4D | >0A68 | | >55 | >0AAB | | >5D | >0AEB | |
| >46 | >0A30 | | >4E | >0A70 | VOID | >56 | >0AB0 | | >5E | >0AF0 | |
| >47 | >0A38 | | >4F | >0A78 | | >57 | >0ABB | | >5F | >0AFB | |

SET: >0C
CLR: >2A

SET: >0D
CLR: >4A

SET: >0E
CLR: >16

SET: >0F
CLR: >6A

| | | | | | | | | | | | |
|-----|-------|------|-----|-------|------|-----|-------|------|-----|-------|------|
| >60 | >0B00 | Tree | >68 | >0B40 | Tree | >70 | >0B80 | Tree | >78 | >0BC0 | Nest |
| >61 | >0B08 | | >69 | >0B48 | | >71 | >0B88 | | >79 | >0BCB | |
| >62 | >0B10 | | >6A | >0B50 | | >72 | >0B90 | | >7A | >0BD0 | |
| >63 | >0B18 | VOID | >6B | >0B58 | | >73 | >0B98 | | >7B | >0BDB | |
| >64 | >0B20 | | >6C | >0B60 | | >74 | >0BA0 | VOID | >7C | >0BE0 | |
| >65 | >0B28 | | >6D | >0B68 | VOID | >75 | >0BAB | | >7D | >0BEB | |
| >66 | >0B30 | | >6E | >0B70 | | >76 | >0BB0 | Log | >7E | >0BF0 | |
| >67 | >0B38 | | >6F | >0B78 | | >77 | >0BB8 | tree | >7F | >0BFB | |

LAND (for catalog)

2

SET: >10
CLR: >1A 6A

SET: >11
CLR: >CE

SET: >12
CLR: >EA

SET: >13
CLR: >FE

| | | | | | | | | | | | |
|-----|-------|-----------------|-----|-------|-----------|-----|-------|--------------|-----|-------|------|
| >80 | >0C00 | Ribs | >88 | >0C40 | Cave Tree | >90 | >0C80 | Cave Outline | >98 | >0CC0 | Cave |
| >81 | >0C08 | Log | >89 | >0C48 | | >91 | >0C88 | | >99 | >0CC8 | ↓ |
| >82 | >0C10 | Log | >8A | >0C50 | | >92 | >0C90 | | >9A | >0CD0 | |
| >83 | >0C18 | Log | >8B | >0C58 | | >93 | >0C98 | | >9B | >0CD8 | |
| >84 | >0C20 | Log | >8C | >0C60 | | >94 | >0CA0 | | >9C | >0CE0 | |
| >85 | >0C28 | | >8D | >0C68 | | >95 | >0CAB | | >9D | >0CE8 | |
| >86 | >0C30 | | >8E | >0C70 | | >96 | >0CB0 | | >9E | >0CF0 | |
| >87 | >0C38 | | >8F | >0C78 | | >97 | >0CB8 | | >9F | >0CF8 | |

SET: >14
CLR: >4E

SET: >15
CLR: >1E

SET: >16
CLR: >14

SET: >17
CLR: >1A

| | | | | | | | | | | | |
|-----|-------|-----------|-----|-------|------|-----|-------|-----------|-----|-------|------|
| >A0 | >0D00 | Hole edge | >AB | >0D40 | Hole | >B0 | >0DB0 | Hole edge | >BB | >0DC0 | Ribs |
| >A1 | >0D08 | | >A9 | >0D48 | | >B1 | >0DB8 | | >B9 | >0DC8 | |
| >A2 | >0D10 | | >AA | >0D50 | | >B2 | >0D90 | | >BA | >0DD0 | Log |
| >A3 | >0D18 | | >AB | >0D58 | | >B3 | >0D98 | | >BB | >0DD8 | Log |
| >A4 | >0D20 | | >AC | >0D60 | | >B4 | >0DA0 | | >BC | >0DE0 | Log |
| >A5 | >0D28 | | >AD | >0D68 | | >B5 | >0DAB | | >BD | >0DE8 | Log |
| >A6 | >0D30 | | >AE | >0D70 | | >B6 | >0DB0 | | >BE | >0DF0 | |
| >A7 | >0D38 | | >AF | >0D78 | | >B7 | >0DB8 | | >BF | >0DF8 | |

SET: >18
CLR: >186

SET: >19
CLR: >186

SET: >1A
CLR: >F86

SET: >1B
CLR: >95

| | | | | | | | | | | | |
|-----|-------|----------|-----|-------|-----|-----|-------|----------|-----|-------|----------|
| >C0 | >0E00 | Dam door | >C8 | >0E40 | Dom | >D0 | >0E80 | Dam Hole | >DB | >0EC0 | Dam/Lake |
| >C1 | >0E08 | | >C9 | >0E48 | | >D1 | >0E88 | | >D9 | >0EC8 | |
| >C2 | >0E10 | | >CA | >0E50 | | >D2 | >0E90 | | >DA | >0ED0 | |
| >C3 | >0E18 | | >CB | >0E58 | | >D3 | >0E98 | | >DB | >0ED8 | |
| >C4 | >0E20 | | >CC | >0E60 | | >D4 | >0EA0 | | >DC | >0EE0 | |
| >C5 | >0E28 | | >CD | >0E68 | | >D5 | >0EAB | | >DD | >0EE8 | |
| >C6 | >0E30 | | >CE | >0E70 | | >D6 | >0EB0 | | >DE | >0EF0 | |
| >C7 | >0E38 | | >CF | >0E78 | | >D7 | >0EB8 | | >DF | >0EF8 | |

SET: >1C
CLR: >1A 69

SET: >1D
CLR: >4A

SET: >1E
CLR: >EA 1A

SET: >1F
CLR: >EA 1A

| | | | | | | | | | | | |
|-----|-------|----|-----|-------|---------|-----|-------|---|-----|-------|----|
| >E0 | >0F00 | ET | >EB | >0F40 | Licycle | >F0 | >0FB0 | ↑ | >FB | >0FC0 | ET |
| >E1 | >0F08 | | >E9 | >0F48 | | >F1 | >0FB8 | ↓ | >F9 | >0FC8 | |
| >E2 | >0F10 | | >EA | >0F50 | | >F2 | >0F90 | | >FA | >0FD0 | |
| >E3 | >0F18 | | >EB | >0F58 | | >F3 | >0F98 | | >FB | >0FD8 | |
| >E4 | >0F20 | | >EC | >0F60 | | >F4 | >0FA0 | | >FC | >0FE0 | |
| >E5 | >0F28 | | >ED | >0F68 | | >F5 | >0FAB | | >FD | >0FEB | |
| >E6 | >0F30 | | >EE | >0F70 | | >F6 | >0FB0 | | >FE | >0FF0 | |
| >E7 | >0F38 | | >EF | >0F78 | | >F7 | >0FB8 | | >FF | >0FF8 | |

LAND 4/83

①

SET: >00
CLR: >74

SET: >01
CLR: >4A

SET: >02
CLR: >9A

SET: >03
CLR: >6A

| | | | | | | | | | | | |
|-----|-------|-------------|-----|-------|---------|-----|-------|------------|-----|-------|------------|
| >00 | >0800 | Block | >08 | >0840 | Shadows | >10 | >0880 | Tree Trunk | >18 | >08C0 | Tree Trunk |
| >01 | >0808 | Animal Area | >09 | >0848 | ↓ | >11 | >0888 | ↓ | >19 | >08C8 | ↓ |
| >02 | >0810 | ↓ | >0A | >0850 | ↓ | >12 | >0890 | | >1A | >08D0 | ↓ |
| >03 | >0818 | ↓ | >0B | >0858 | VOID | >13 | >0898 | | >1B | >08D8 | ↓ |
| >04 | >0820 | ↓ | >0C | >0860 | Shadows | >14 | >08A0 | | >1C | >08E0 | |
| >05 | >0828 | Stack | >0D | >0868 | ↓ | >15 | >08A8 | | >1D | >08E8 | |
| >06 | >0830 | | >0E | >0870 | ↓ | >16 | >08B0 | | >1E | >08F0 | |
| >07 | >0838 | | >0F | >0878 | ↓ | >17 | >08B8 | | >1F | >08F8 | |

SET: >04
CLR: >2A

SET: >05
CLR: >CA

SET: >06
CLR: >8A

SET: >07
CLR: >DD

| | | | | | | | | | | | |
|-----|-------|--------|-----|-------|--------|-----|-------|--------|-----|-------|--------|
| >20 | >0900 | Tree | >28 | >0940 | Tree | >30 | >0980 | Flower | >38 | >09C0 | Ground |
| >21 | >0908 | ↓ | >29 | >0948 | ↓ | >31 | >0988 | | >39 | >09C8 | |
| >22 | >0910 | ↓ | >2A | >0950 | ↓ | >32 | >0990 | | >3A | >09D0 | |
| >23 | >0918 | ↓ | >2B | >0958 | ↓ | >33 | >0998 | | >3B | >09D8 | |
| >24 | >0920 | ↓ | >2C | >0960 | ↓ | >34 | >09A0 | | >3C | >09E0 | |
| >25 | >0928 | ↓ | >2D | >0968 | ↓ | >35 | >09A8 | | >3D | >09E8 | |
| >26 | >0930 | Flower | >2E | >0970 | Spruce | >36 | >09B0 | | >3E | >09F0 | |
| >27 | >0938 | | >2F | >0978 | | >37 | >09B8 | | >3F | >09F8 | |

SET: >08
CLR: >5A

SET: >09
CLR: >C5

SET: >0A
CLR: >F5

SET: >0B
CLR: >E2

| | | | | | | | | | | | |
|-----|-------|------|-----|-------|--------|-----|-------|------|-----|-------|-----------|
| >40 | >0A00 | Lake | >48 | >0A40 | Island | >50 | >0AB0 | Wave | >58 | >0AC0 | Lily Pond |
| >41 | >0A08 | ↓ | >49 | >0A48 | ↓ | >51 | >0AB8 | | >59 | >0AC8 | |
| >42 | >0A10 | ↓ | >4A | >0A50 | ↓ | >52 | >0A90 | | >5A | >0AD0 | |
| >43 | >0A18 | ↓ | >4B | >0A58 | ↓ | >53 | >0A98 | | >5B | >0AD8 | |
| >44 | >0A20 | ↓ | >4C | >0A60 | ↓ | >54 | >0AA0 | | >5C | >0AE0 | |
| >45 | >0A28 | ↓ | >4D | >0A68 | ↓ | >55 | >0AAB | | >5D | >0AEB | |
| >46 | >0A30 | ↓ | >4E | >0A70 | VOID | >56 | >0AB0 | | >5E | >0AF0 | |
| >47 | >0A38 | ↓ | >4F | >0A78 | | >57 | >0ABB | | >5F | >0AF8 | |

SET: >0C
CLR: >2A

SET: >0D
CLR: >AD

SET: >0E
CLR: >16

SET: >0F
CLR: >C1

| | | | | | | | | | | | |
|-----|-------|---|-----|-------|------|-----|-------|---------|-----|-------|-----------|
| >60 | >0B00 | ↓ | >68 | >0B40 | Food | >70 | >0BB0 | Trunk d | >78 | >0BC0 | Cave Tree |
| >61 | >0B08 | ↓ | >69 | >0B48 | ↓ | >71 | >0BB8 | ↓ | >79 | >0BC8 | ↓ |
| >62 | >0B10 | ↓ | >6A | >0B50 | ↓ | >72 | >0B90 | ↓ | >7A | >0BD0 | |
| >63 | >0B18 | ↓ | >6B | >0B58 | ↓ | >73 | >0B98 | ↓ | >7B | >0BD8 | |
| >64 | >0B20 | ↓ | >6C | >0B60 | ↓ | >74 | >0BA0 | VOID | >7C | >0BE0 | |
| >65 | >0B28 | ↓ | >6D | >0B68 | VOID | >75 | >0BAB | | >7D | >0BE8 | |
| >66 | >0B30 | ↓ | >6E | >0B70 | | >76 | >0BB0 | | >7E | >0BF0 | |
| >67 | >0B38 | ↓ | >6F | >0B78 | | >77 | >0BB8 | | >7F | >0BF8 | |

LAND 4/83

(2)

SET: >10
CLR: >2E

SET: >11
CLR: >CE

SET: >12
CLR: >9E

SET: >13
CLR: >FE

| | | | | | | | | | | | |
|-----|-------|-----------|-----|-------|-----------|-----|-------|-----------|-----|-------|------|
| >80 | >0C00 | Cave Tree | >88 | >0C40 | Cave Tree | >90 | >0CB0 | Cave Tree | >98 | >0CC0 | Cave |
| >81 | >0C08 | ↓ | >89 | >0C48 | ↓ | >91 | >0CB8 | | >99 | >0CC8 | ↓ |
| >82 | >0C10 | | >8A | >0C50 | | >92 | >0C90 | | >9A | >0CD0 | |
| >83 | >0C18 | | >8B | >0C58 | | >93 | >0C98 | | >9B | >0CDB | |
| >84 | >0C20 | | >8C | >0C60 | | >94 | >0CA0 | | >9C | >0CE0 | |
| >85 | >0C28 | | >8D | >0C68 | | >95 | >0CAB | | >9D | >0CEB | |
| >86 | >0C30 | | >8E | >0C70 | | >96 | >0CB0 | | >9E | >0CF0 | |
| >87 | >0C38 | | >8F | >0C78 | | >97 | >0CB8 | | >9F | >0CF8 | |

SET: >14
CLR: >4E

SET: >15
CLR: >1E

SET: >16
CLR: >14

SET: >17
CLR: >

| | | | | | | | | | | | |
|-----|-------|-----------|-----|-------|------|-----|-------|-----------|-----|-------|--|
| >A0 | >0D00 | Hole Edge | >A8 | >0D40 | Hole | >B0 | >0DB0 | Hole/Edge | >BB | >0DC0 | |
| >A1 | >0D08 | ↓ | >A9 | >0D48 | ↓ | >B1 | >0DB8 | ↓ | >B9 | >0DC8 | |
| >A2 | >0D10 | | >AA | >0D50 | | >B2 | >0D90 | | >BA | >0DD0 | |
| >A3 | >0D18 | | >AB | >0D58 | | >B3 | >0D98 | | >BB | >0DD8 | |
| >A4 | >0D20 | | >AC | >0D60 | | >B4 | >0DA0 | | >BC | >0DE0 | |
| >A5 | >0D28 | | >AD | >0D68 | | >B5 | >0DAB | | >BD | >0DE8 | |
| >A6 | >0D30 | | >AE | >0D70 | | >B6 | >0DB0 | | >BE | >0DF0 | |
| >A7 | >0D38 | | >AF | >0D78 | | >B7 | >0DB8 | | >BF | >0DF8 | |

SET: >18
CLR: >

SET: >19
CLR: >

SET: >1A
CLR: >

SET: >1B
CLR: ~~2A7~~

| | | | | | | | | | | | |
|-----|-------|--|-----|-------|--|-----|-------|--|-----|-------|------|
| >C0 | >0E00 | | >C8 | >0E40 | | >D0 | >0EB0 | | >D8 | >0EC0 | Frog |
| >C1 | >0E08 | | >C9 | >0E48 | | >D1 | >0EB8 | | >D9 | >0EC8 | X |
| >C2 | >0E10 | | >CA | >0E50 | | >D2 | >0E90 | | >DA | >0ED0 | |
| >C3 | >0E18 | | >CB | >0E58 | | >D3 | >0E98 | | >DB | >0ED8 | |
| >C4 | >0E20 | | >CC | >0E60 | | >D4 | >0EA0 | | >DC | >0EE0 | |
| >C5 | >0E28 | | >CD | >0E68 | | >D5 | >0EAB | | >DD | >0EE8 | |
| >C6 | >0E30 | | >CE | >0E70 | | >D6 | >0EB0 | | >DE | >0EF0 | |
| >C7 | >0E38 | | >CF | >0E78 | | >D7 | >0EB8 | | >DF | >0EF8 | |

SET: >1C
CLR: >1A

SET: >1D
CLR: >4A

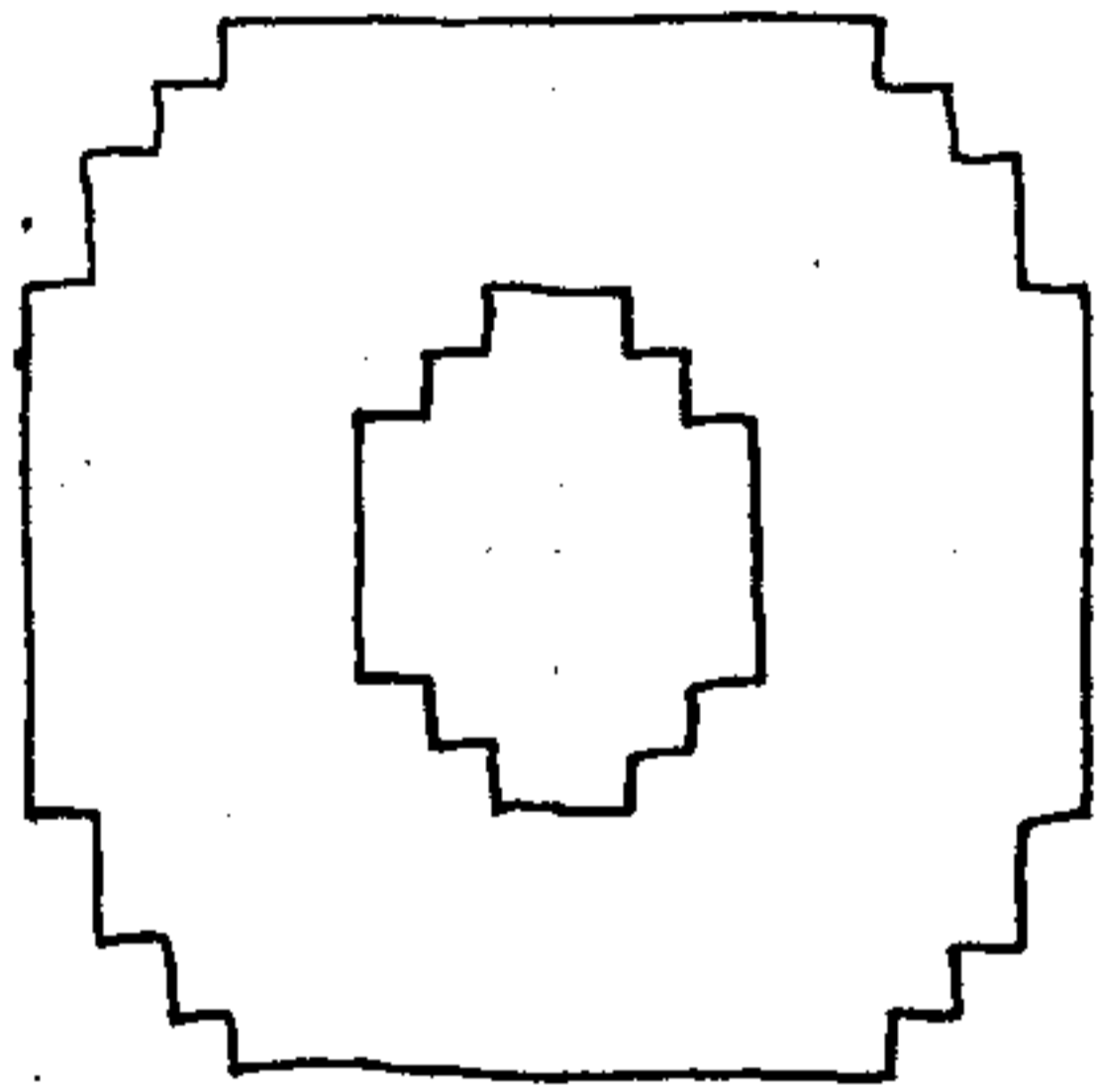
SET: >1E
CLR: >EA 1A

SET: >1F
CLR: >EA 1A

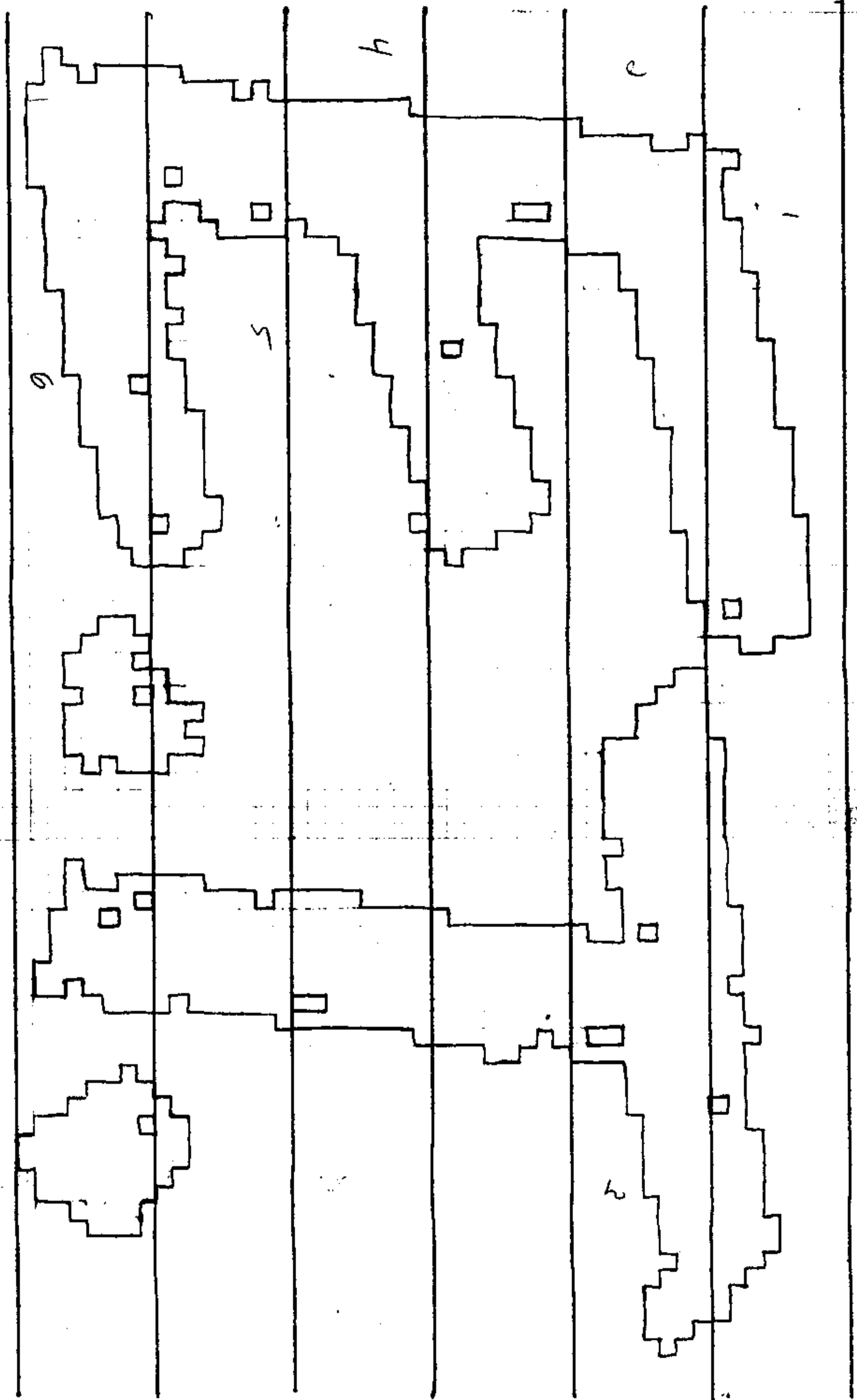
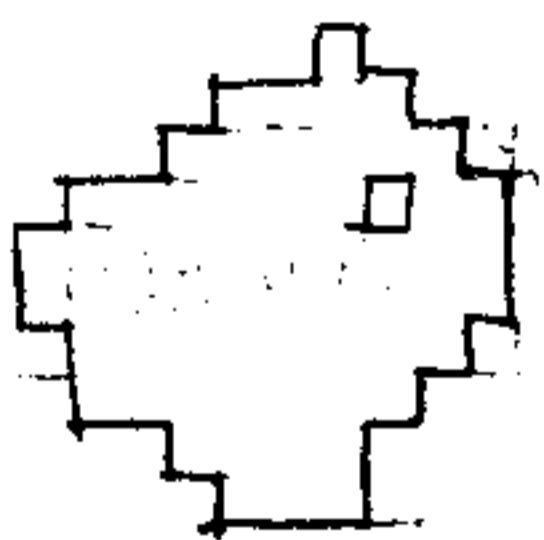
| | | | | | | | | | | | |
|-----|-------|---------|-----|-------|---------|-----|-------|----|-----|-------|----|
| >E0 | >0F00 | NO VOID | >E8 | >0F40 | NO VOID | >F0 | >0FB0 | ET | >FB | >0FC0 | ET |
| >E1 | >0F08 | HEAD | >E9 | >0F48 | NO VOID | >F1 | >0FB8 | ↓ | >F9 | >0FC8 | |
| >E2 | >0F10 | ELLIOTS | >EA | >0F50 | | >F2 | >0F90 | | >FA | >0FD0 | |
| >E3 | >0F18 | HEAD | >EB | >0F58 | | >F3 | >0F98 | | >FB | >0FDB | |
| >E4 | >0F20 | | >EC | >0F60 | | >F4 | >0FA0 | | >FC | >0FE0 | |
| >E5 | >0F28 | | >ED | >0F68 | | >F5 | >0FAB | | >FD | >0FEB | |
| >E6 | >0F30 | | >EE | >0F70 | | >F6 | >0FB0 | | >FE | >0FF0 | |
| >E7 | >0F38 | | >EF | >0F78 | | >F7 | >0FB8 | | >FF | >0FF8 | |

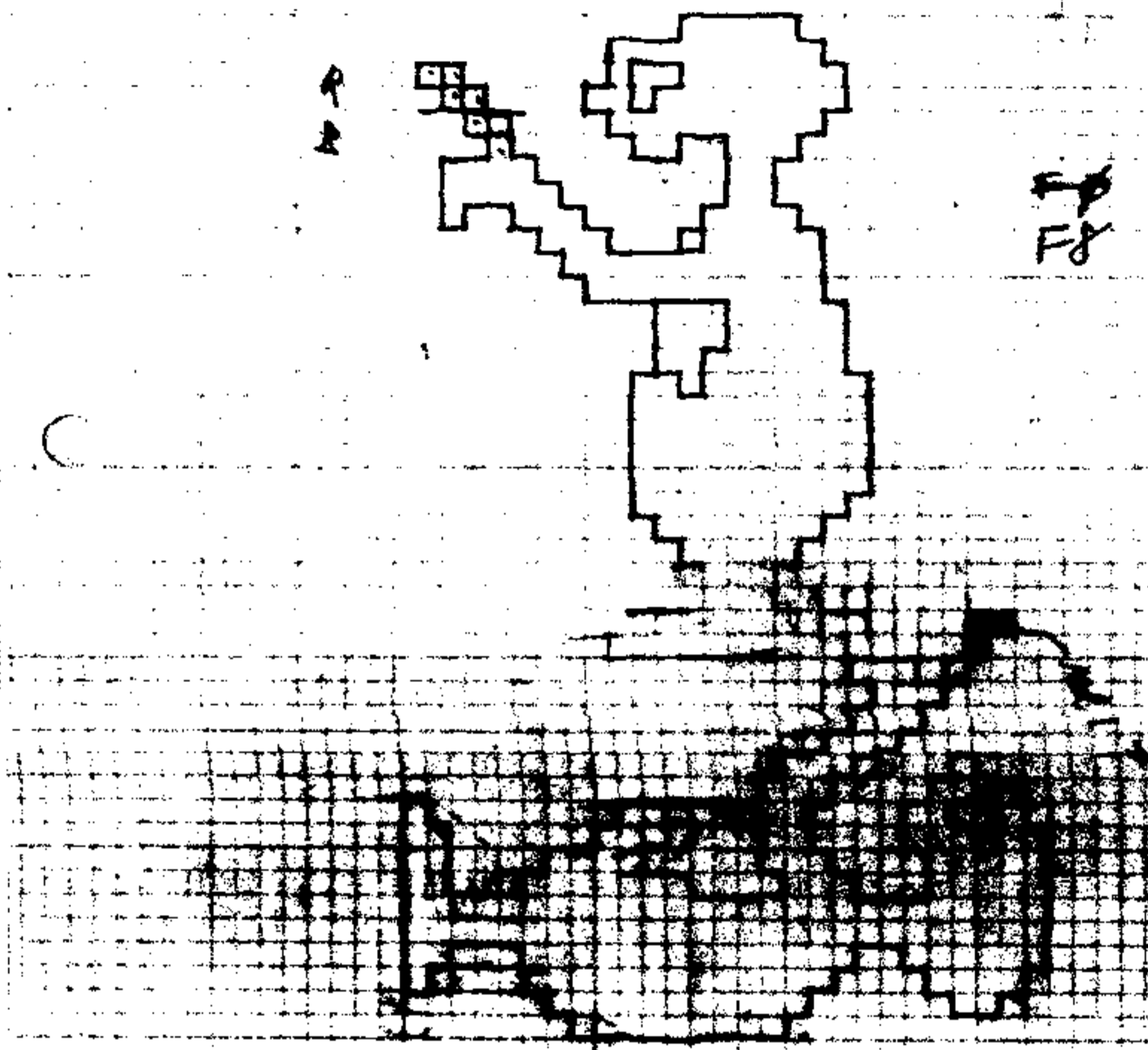
NO VOID
1 char

NO VOID
6 char



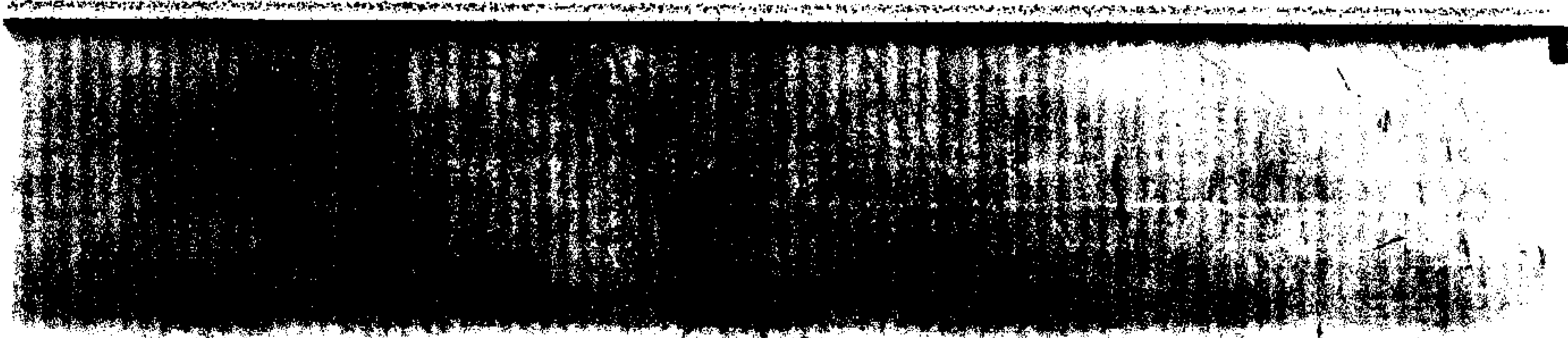
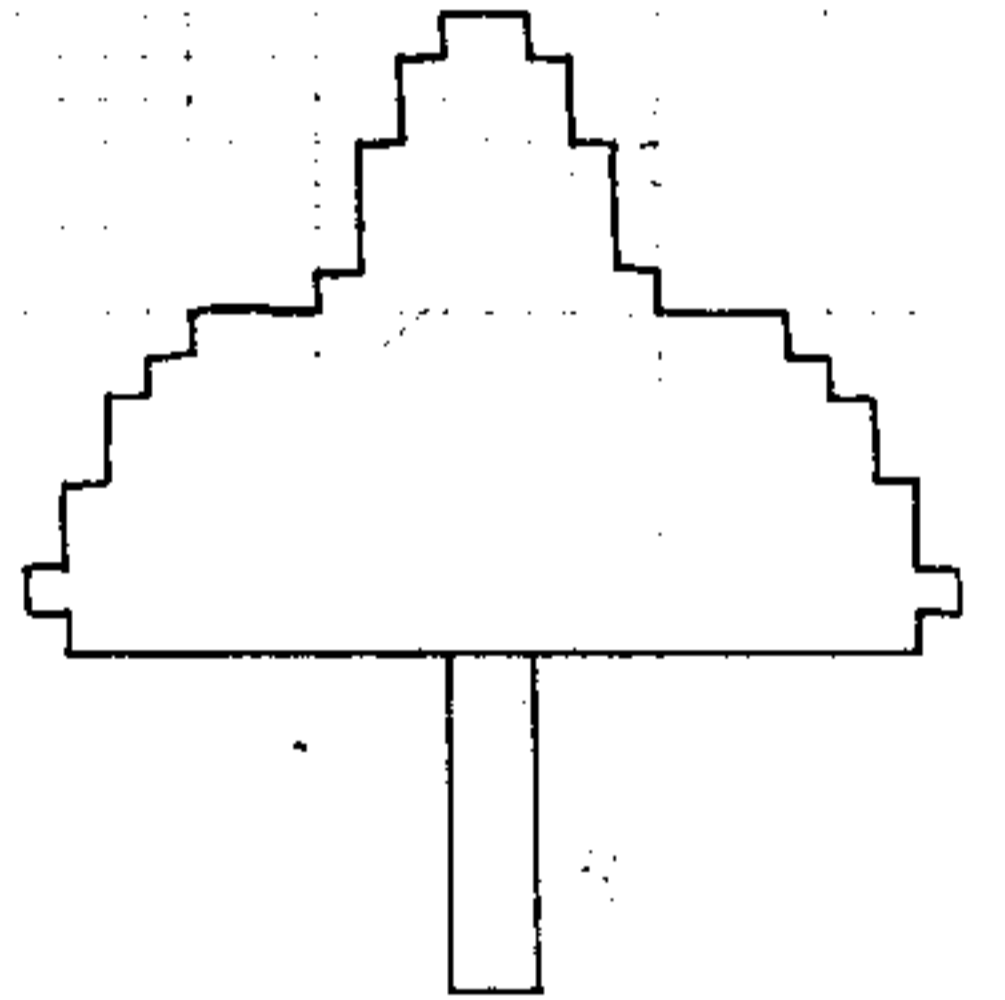
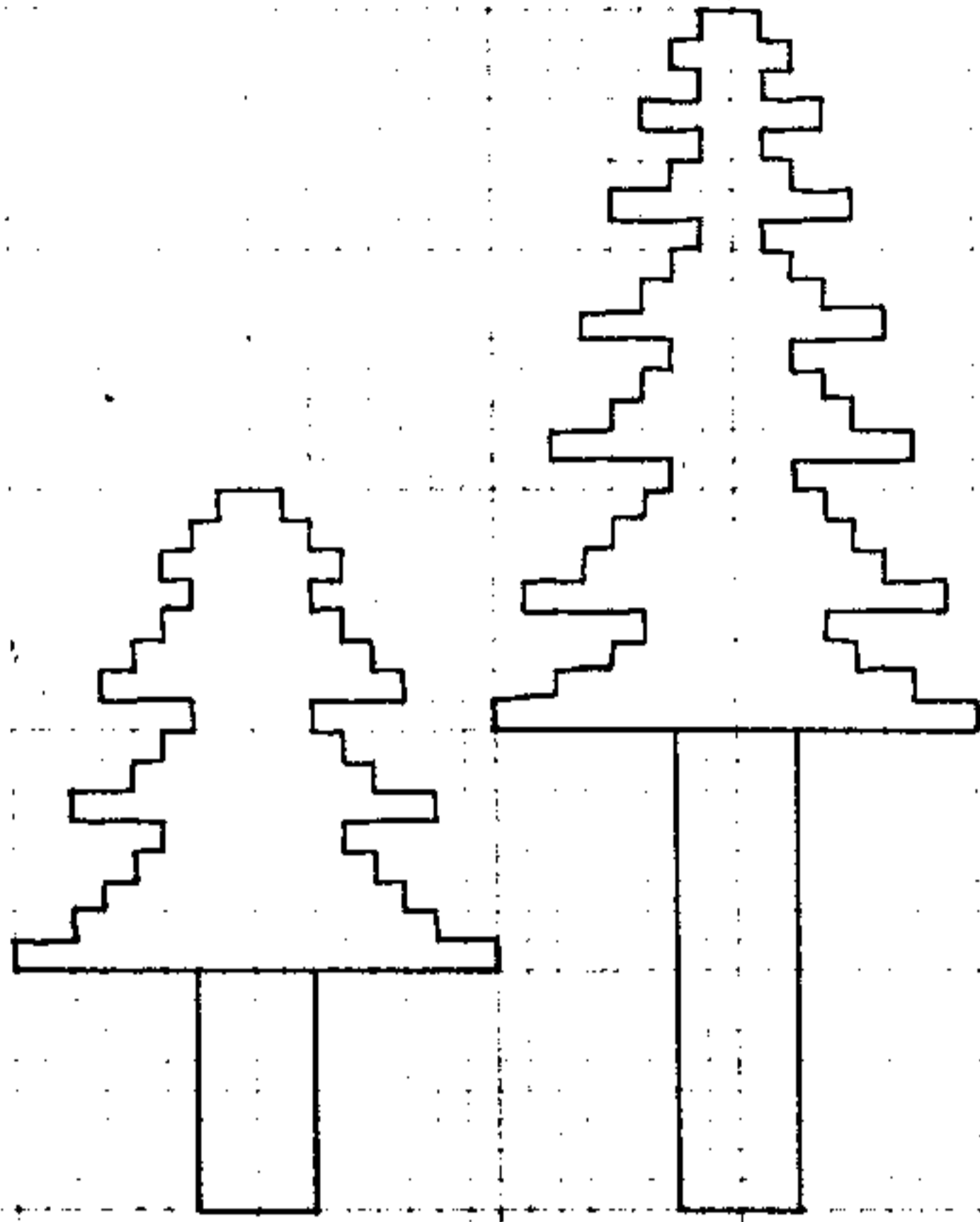
IGNORE
RED
LINES

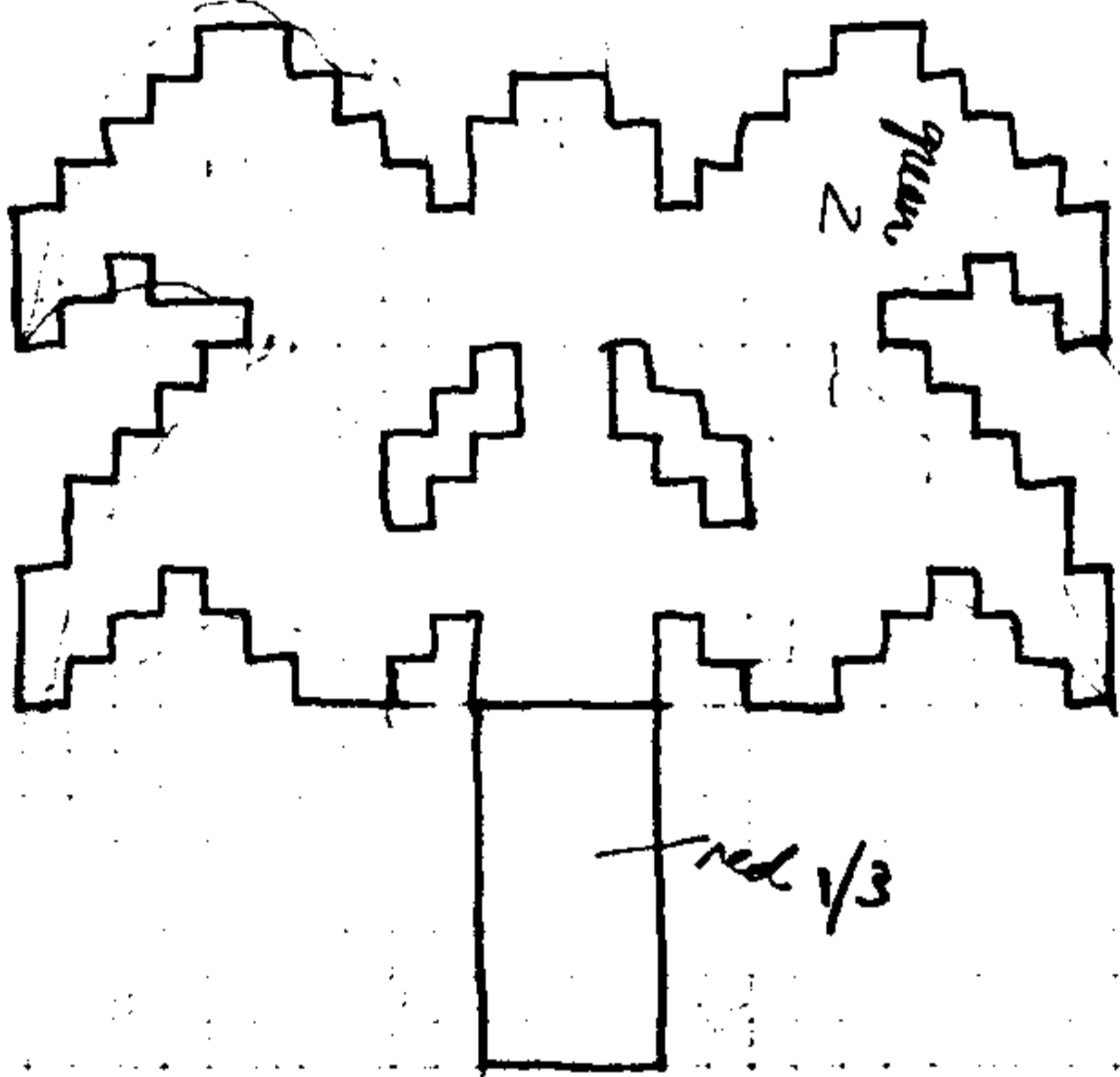




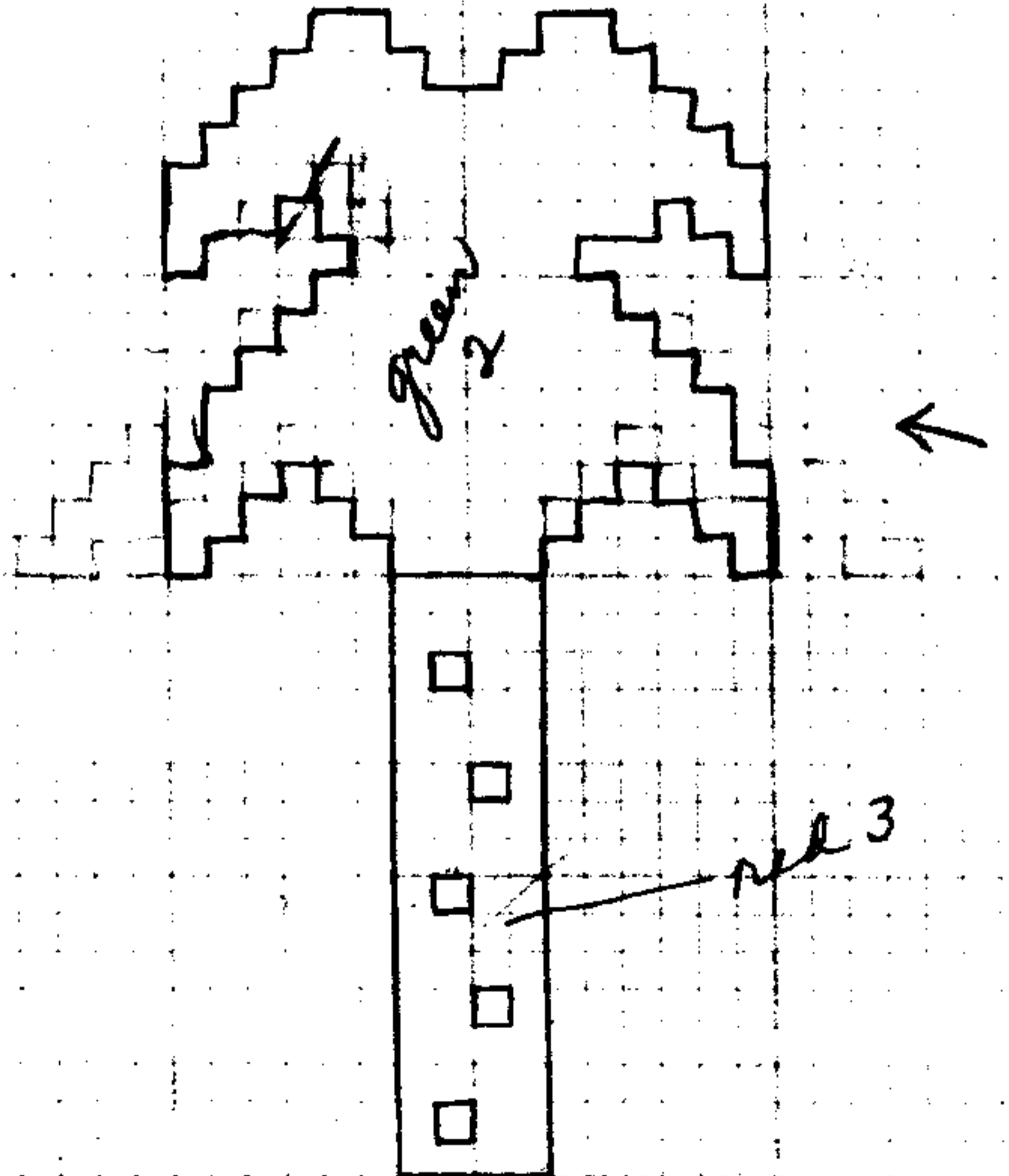
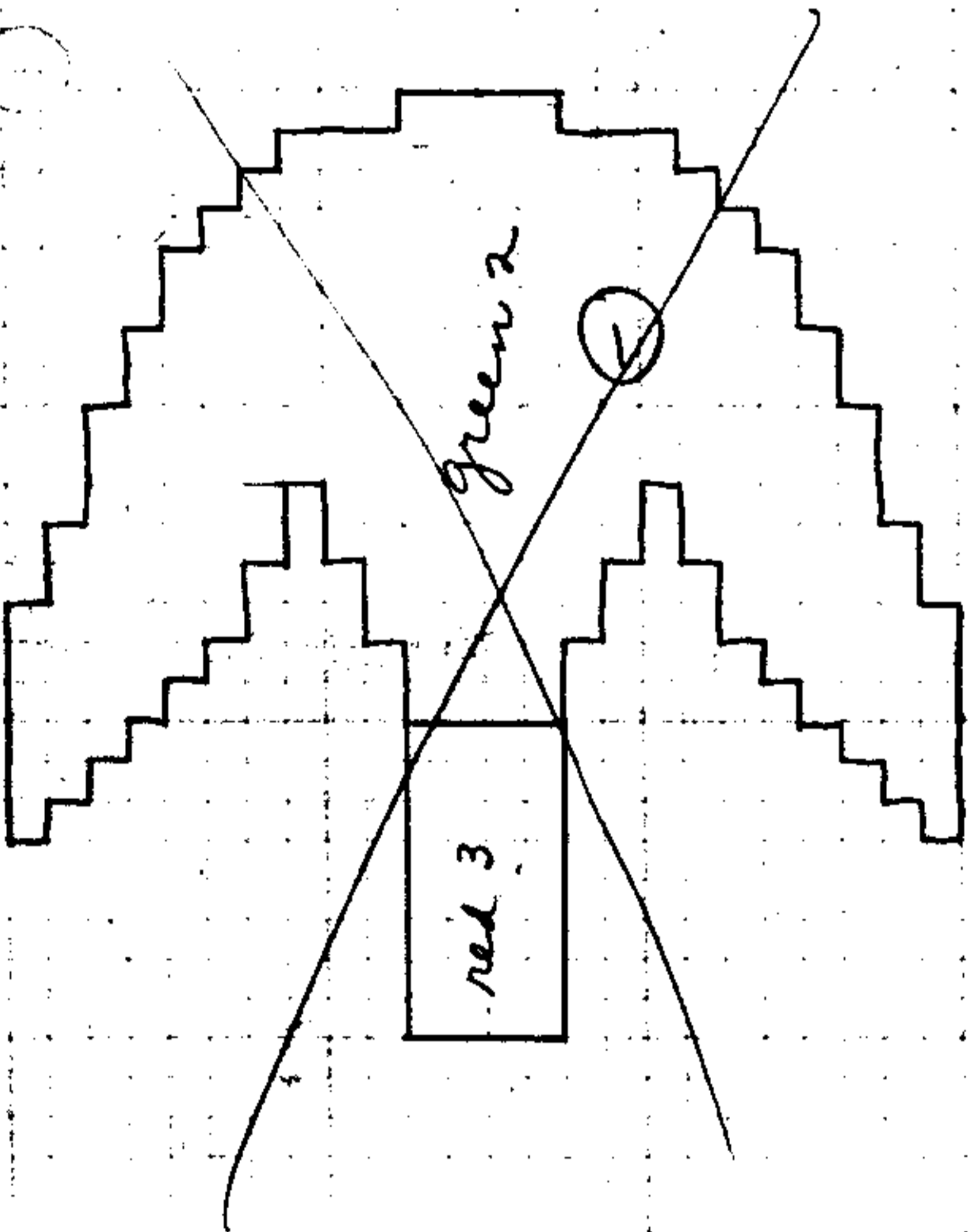
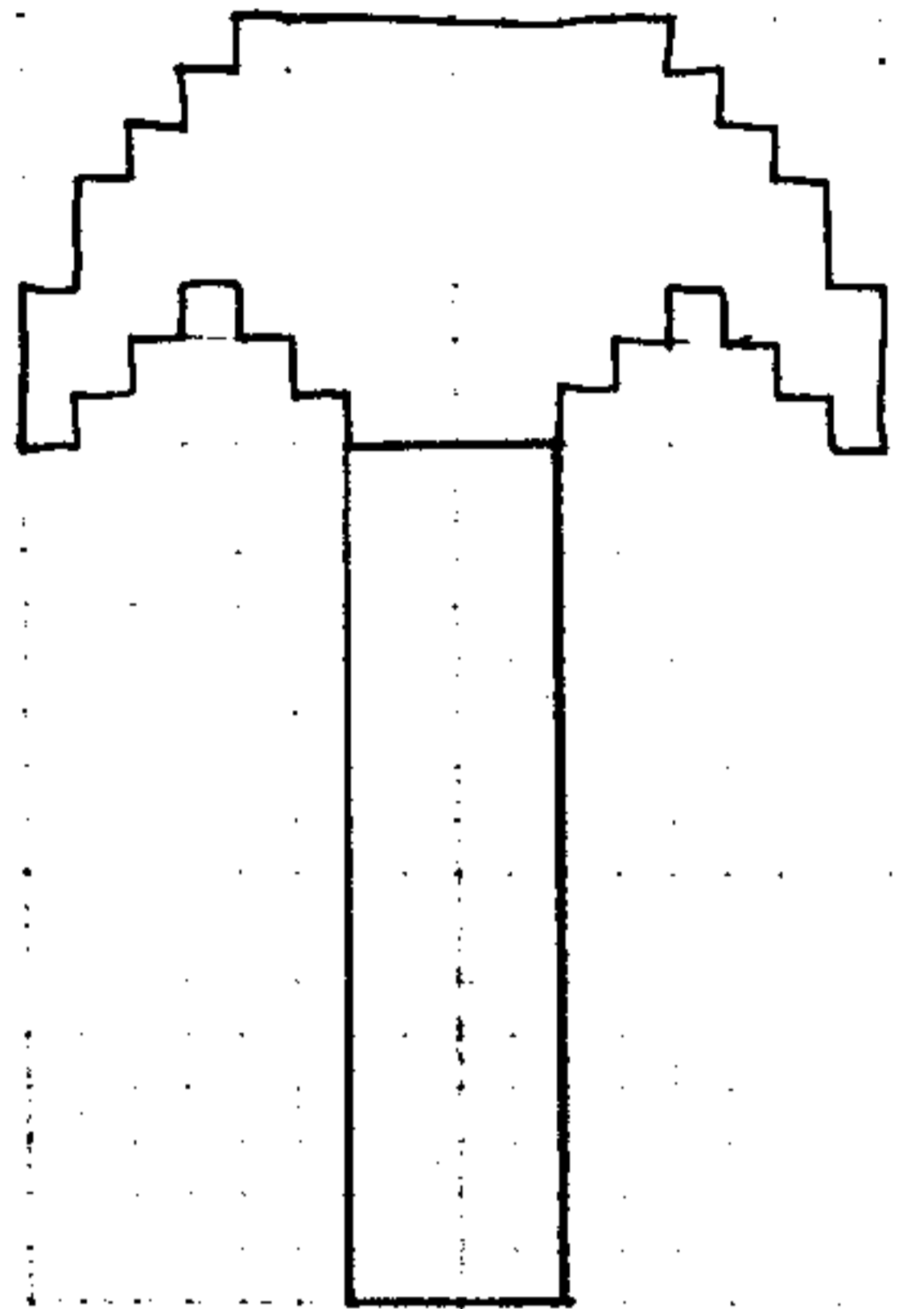
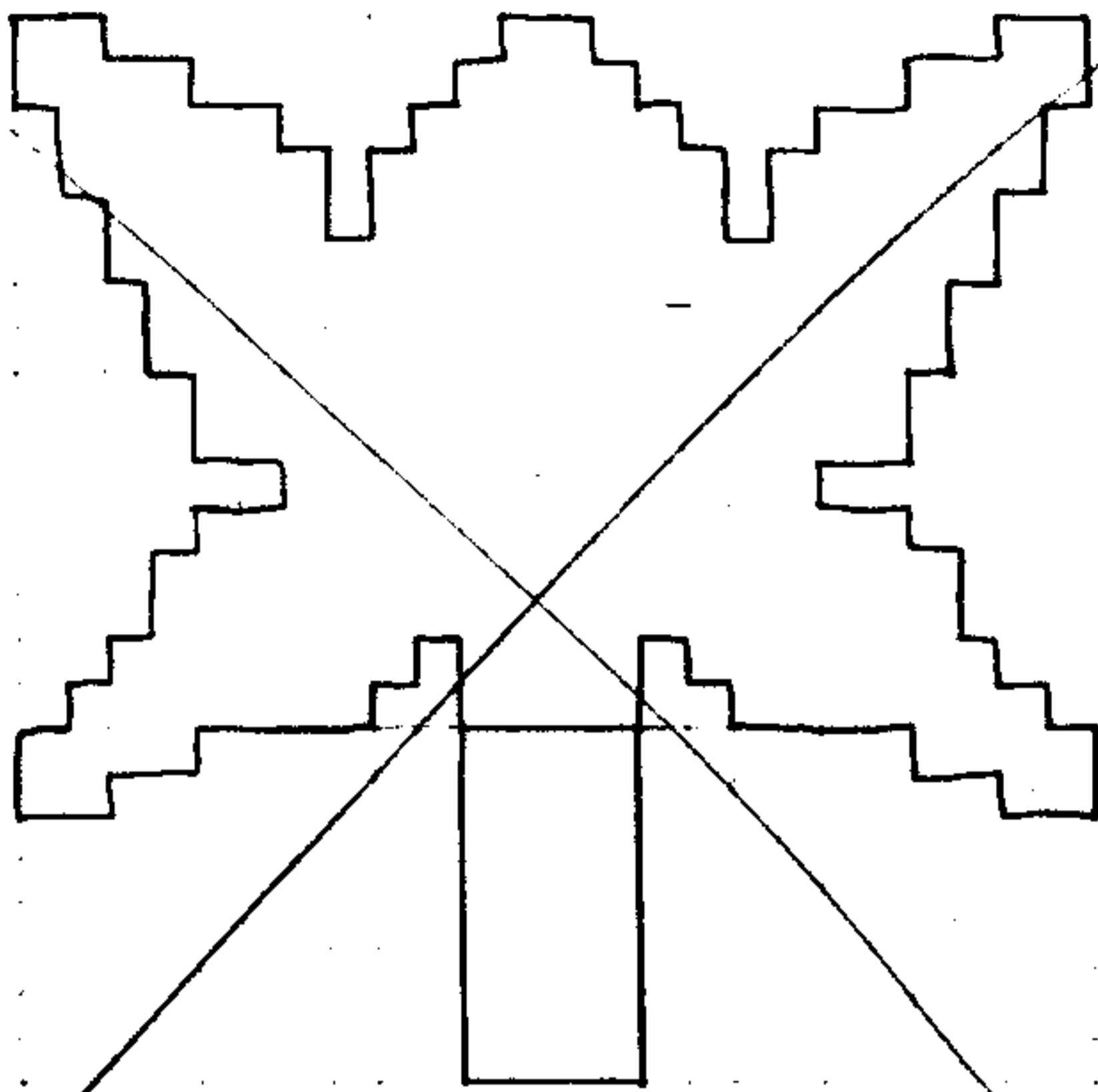
F₀
F₁
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F₆
F₇
F₈





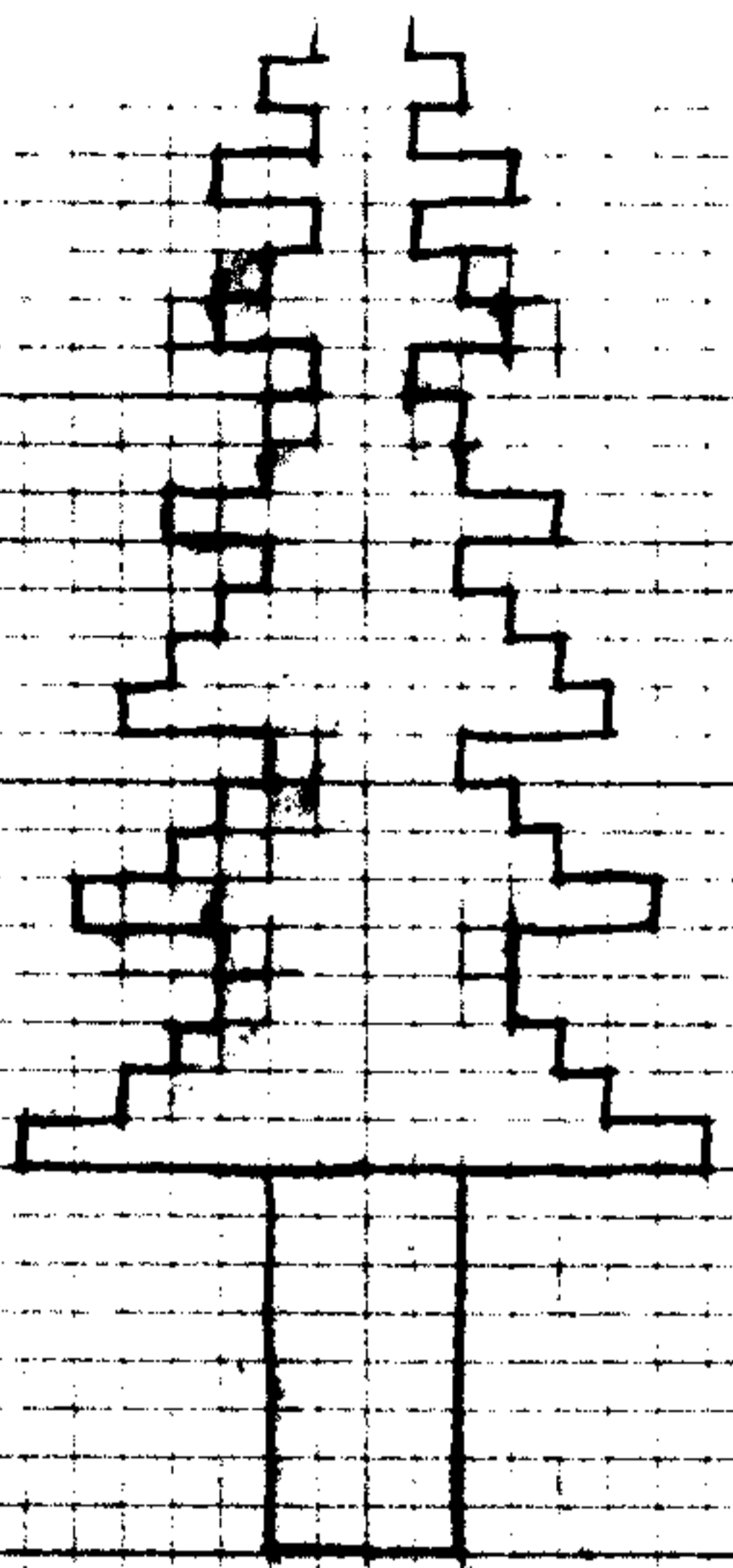


Jungle Tree

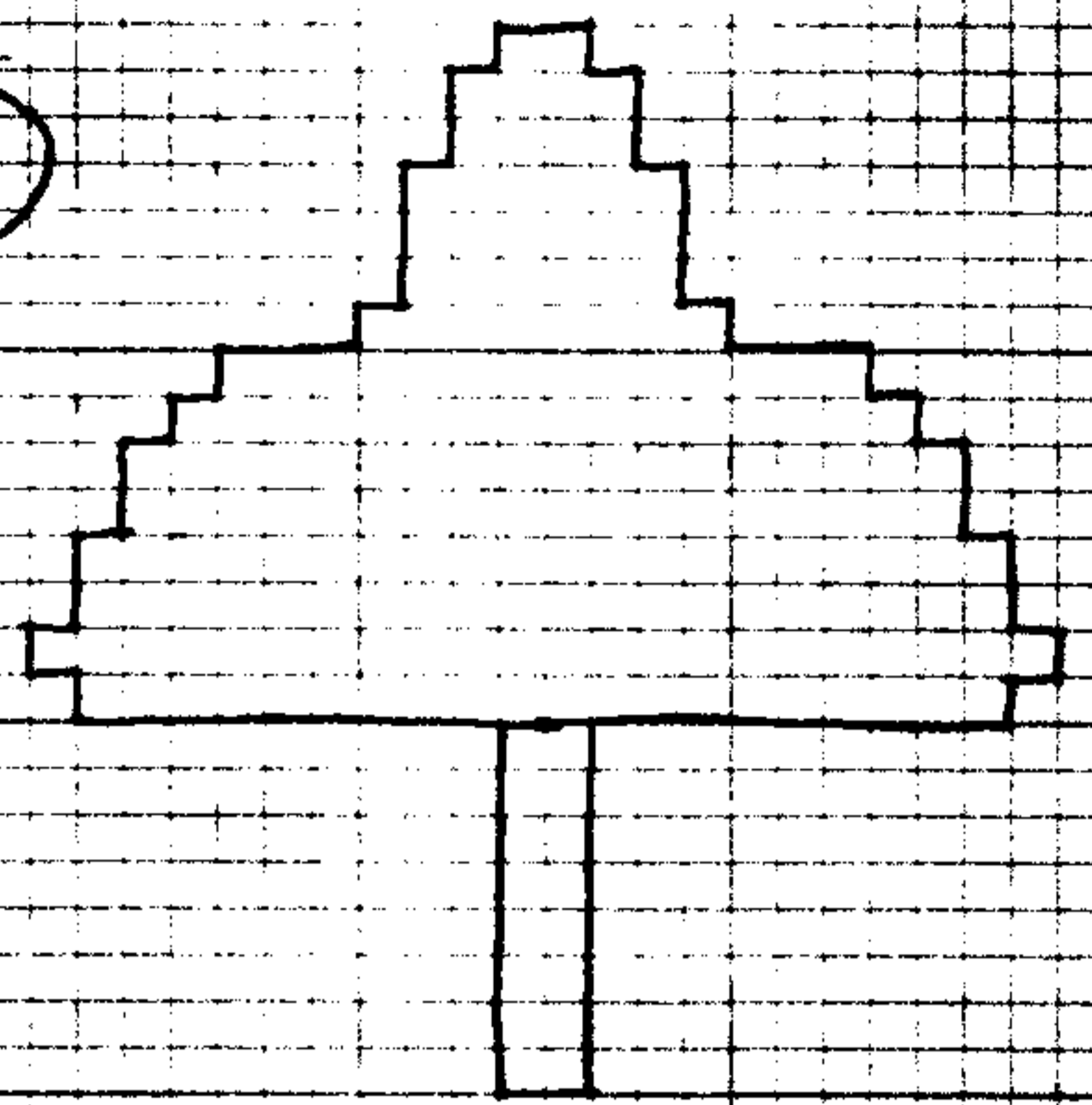


trees for "jungle"

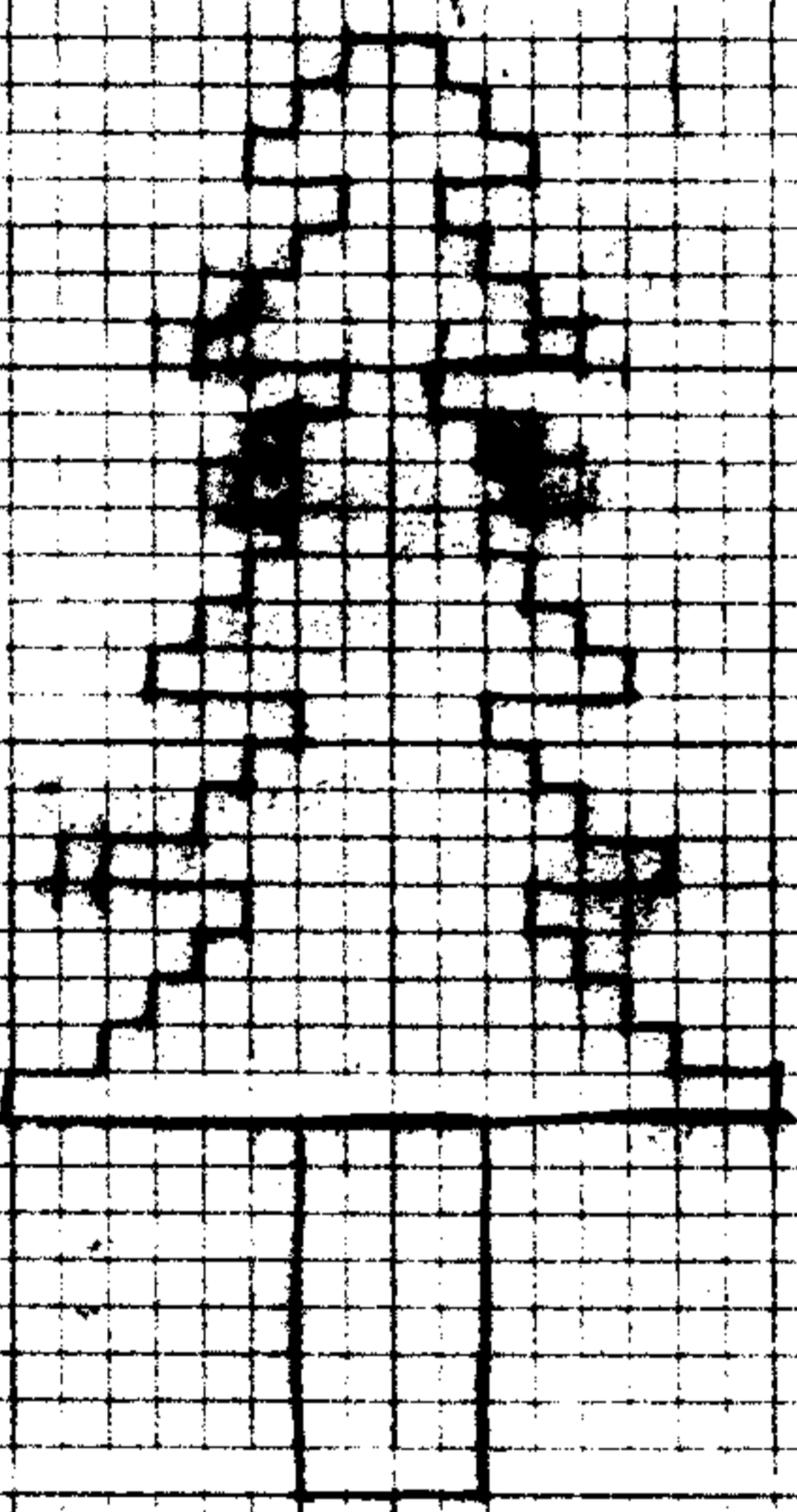
5/21

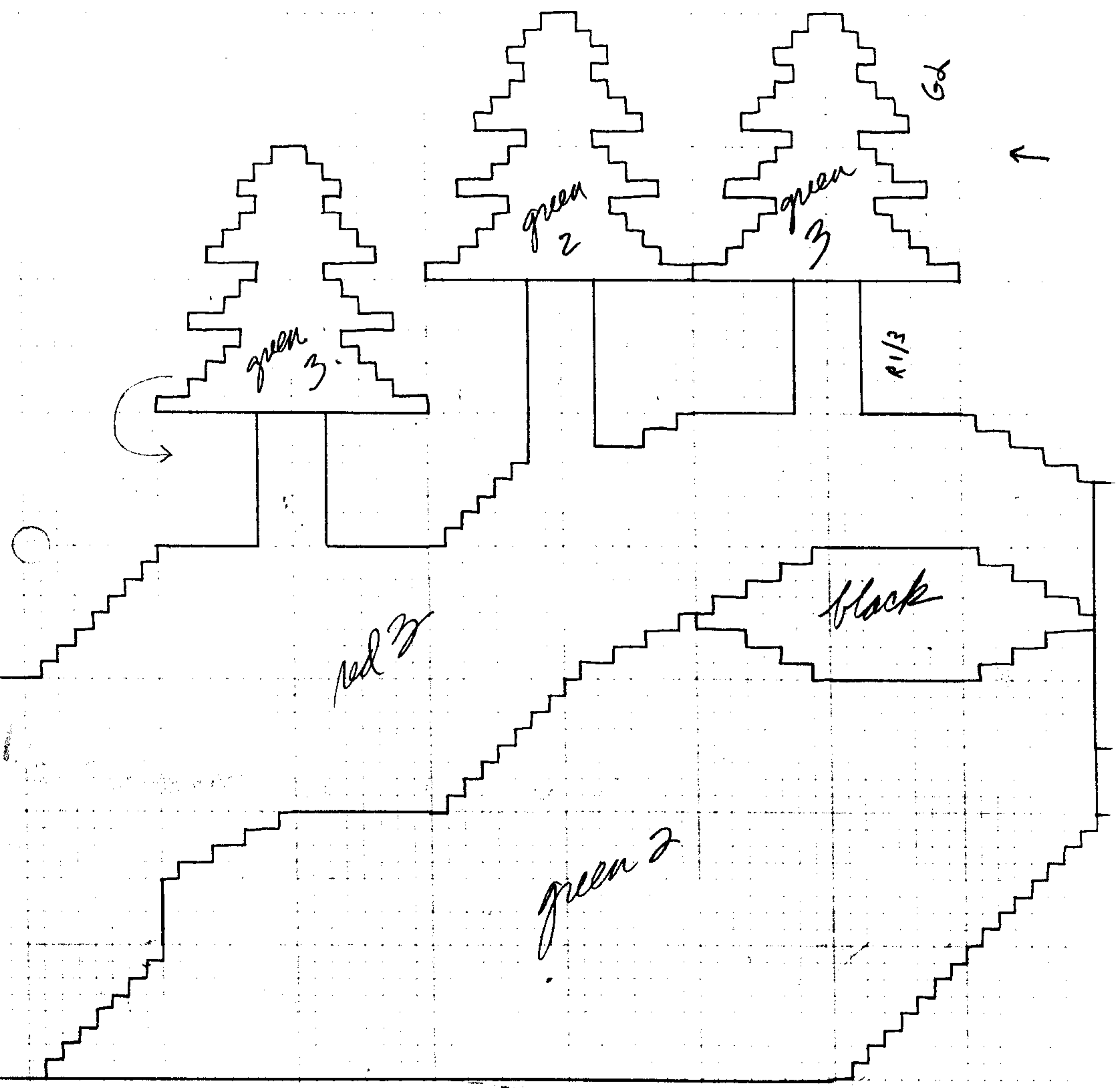


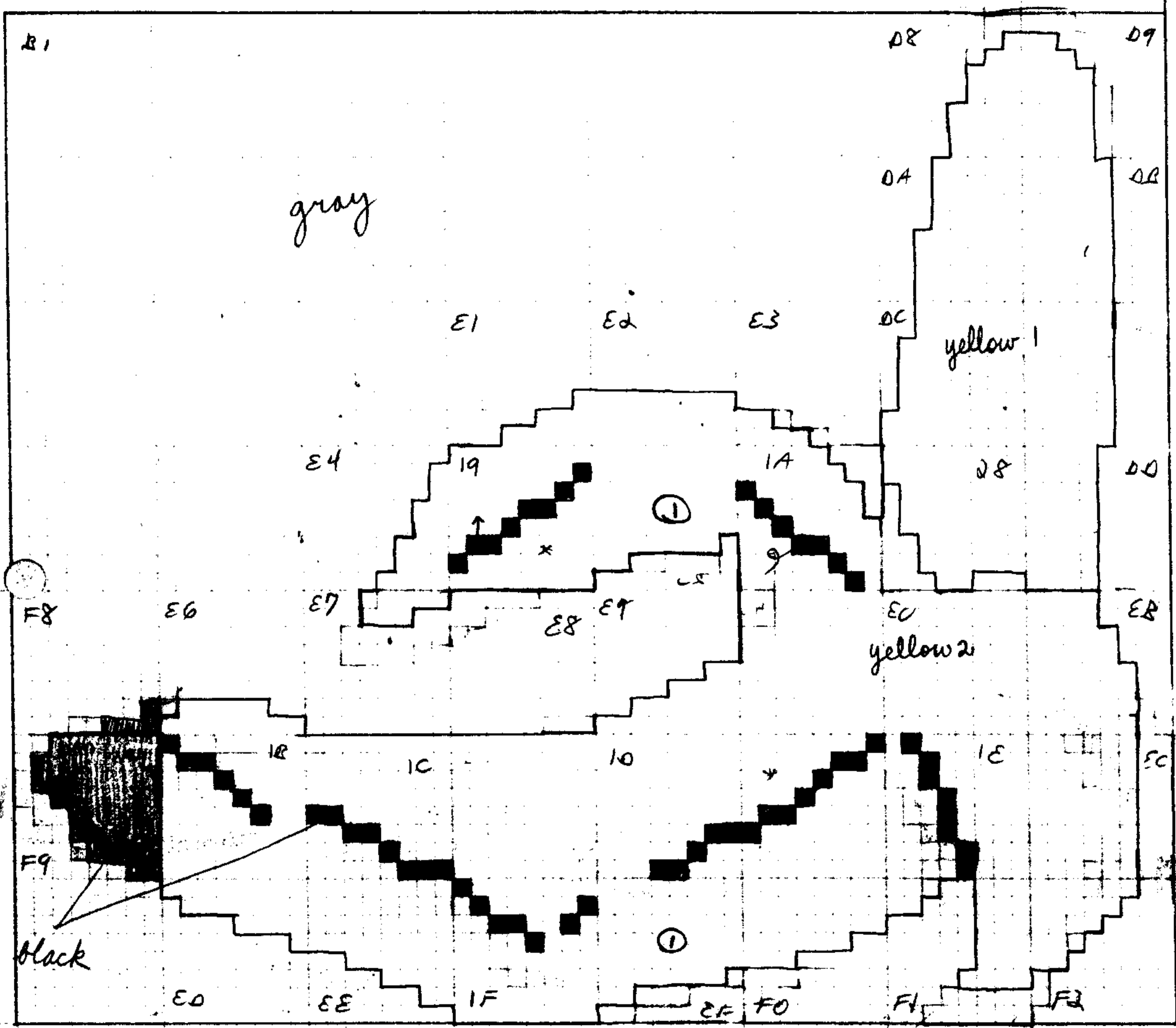
(2) (2)



(6) (9)



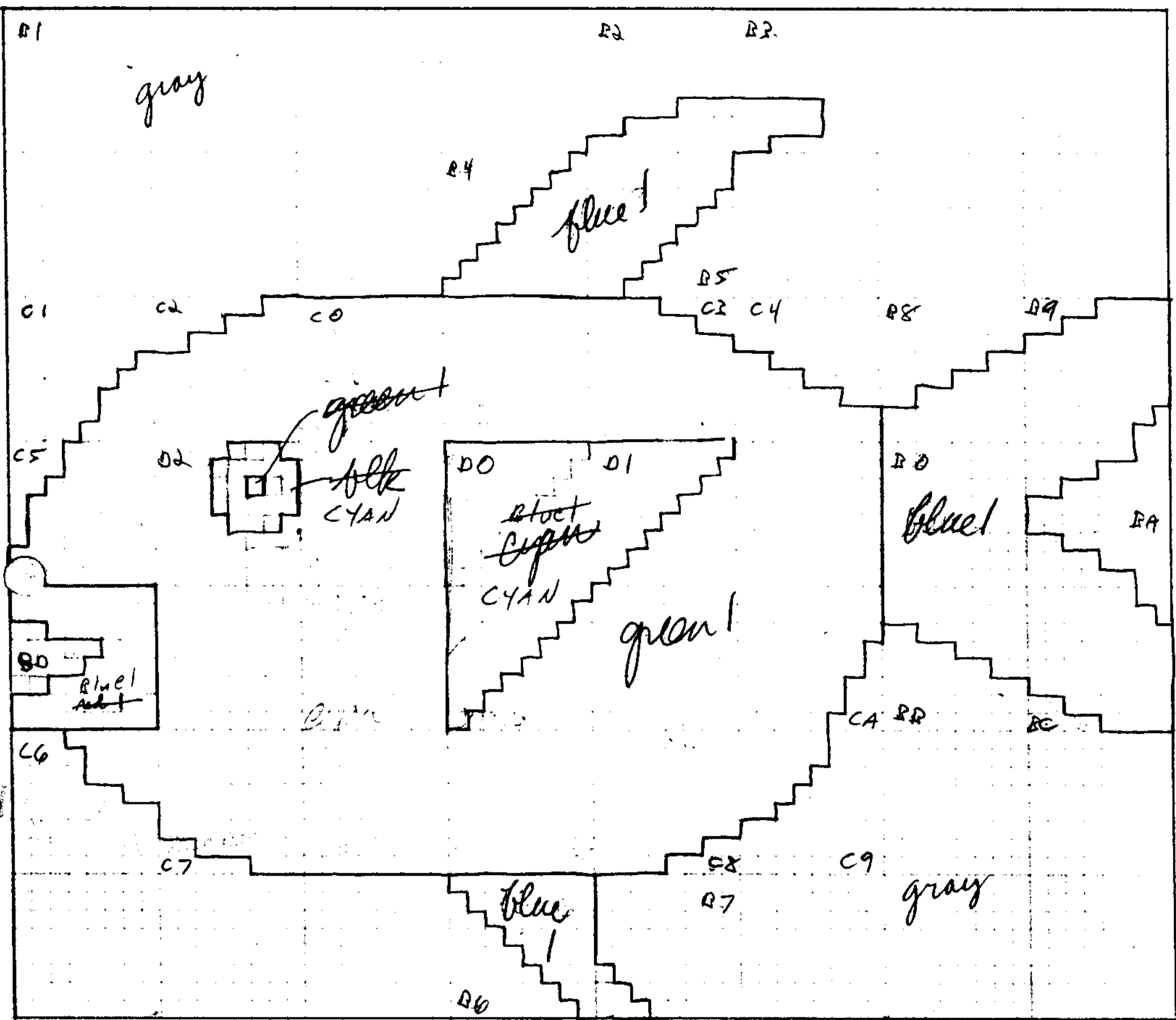




Y1/Y2 1chavina set
peel

N1/Y2 19(-3)

"banana" detail
(food choice)



"fish" detail
(food choice)



gray

R1

A0

A1

A4

AA

AR

A2

A4

A5

A3

AR

AE

A6

green2

green3

AF

A7

AC

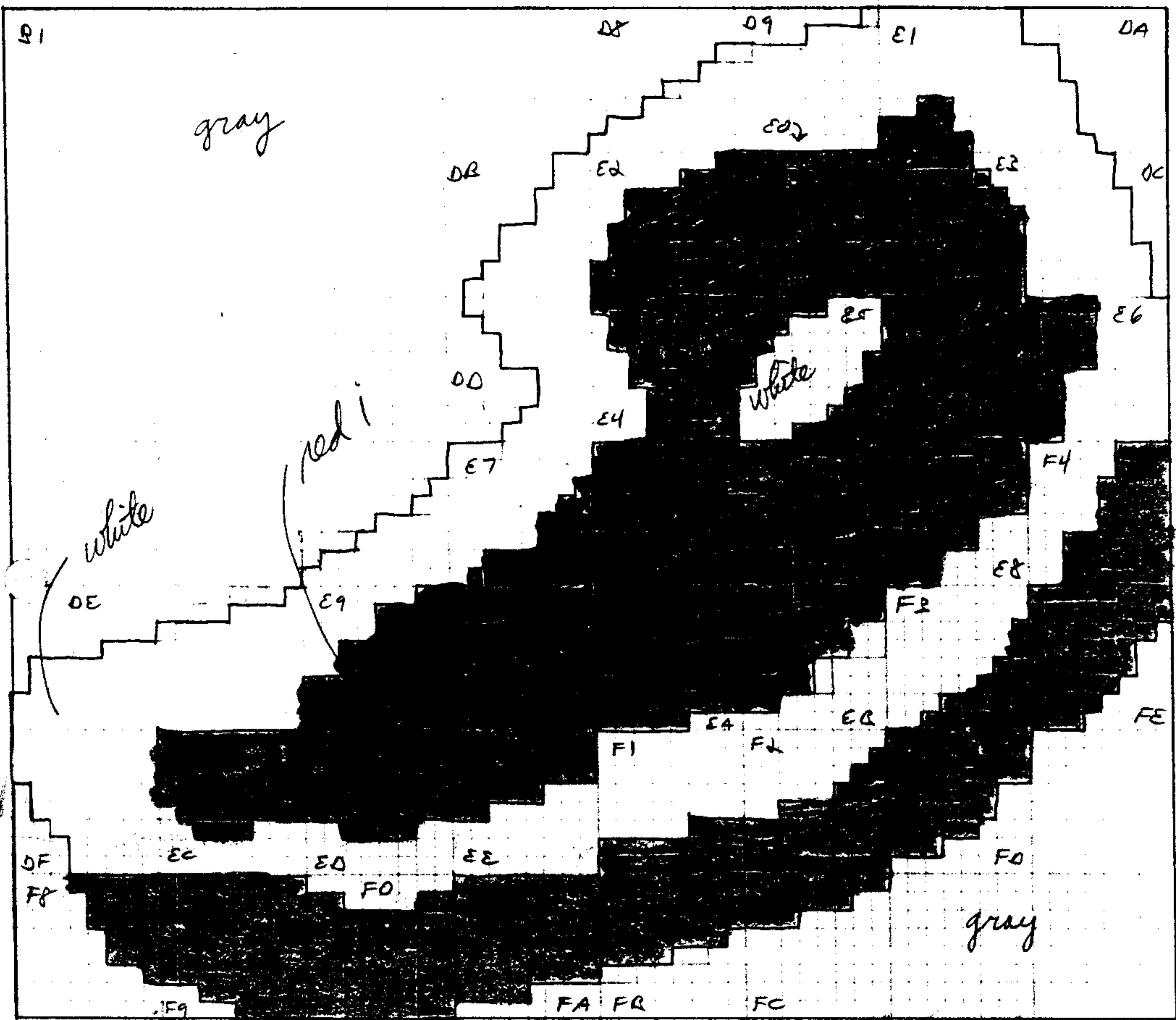
AD

Gd

G3

"leaves" detail
(food choice)

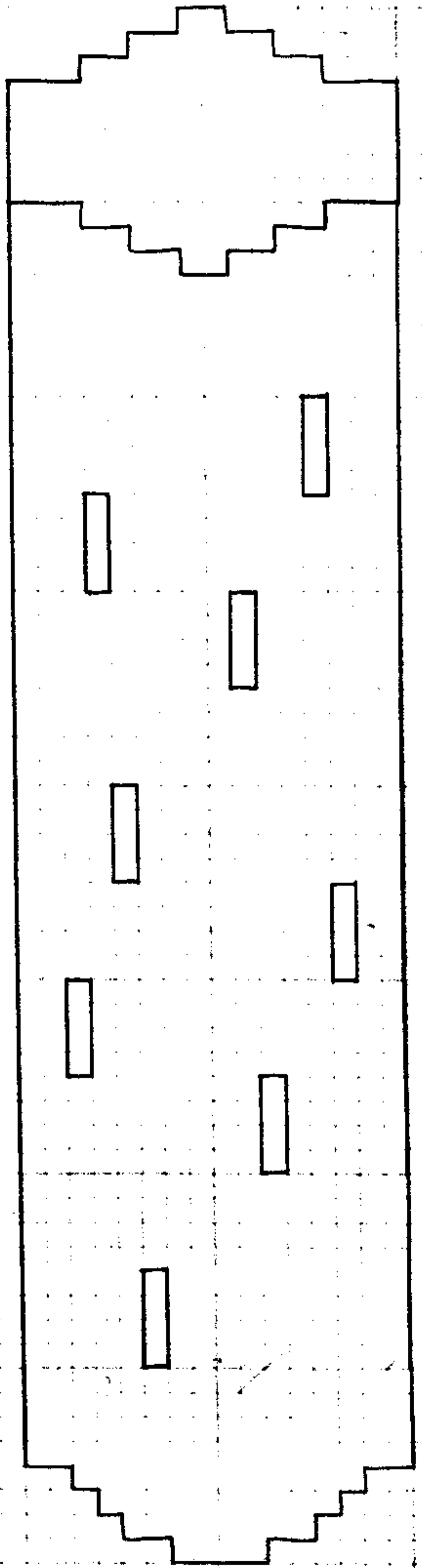
4/16



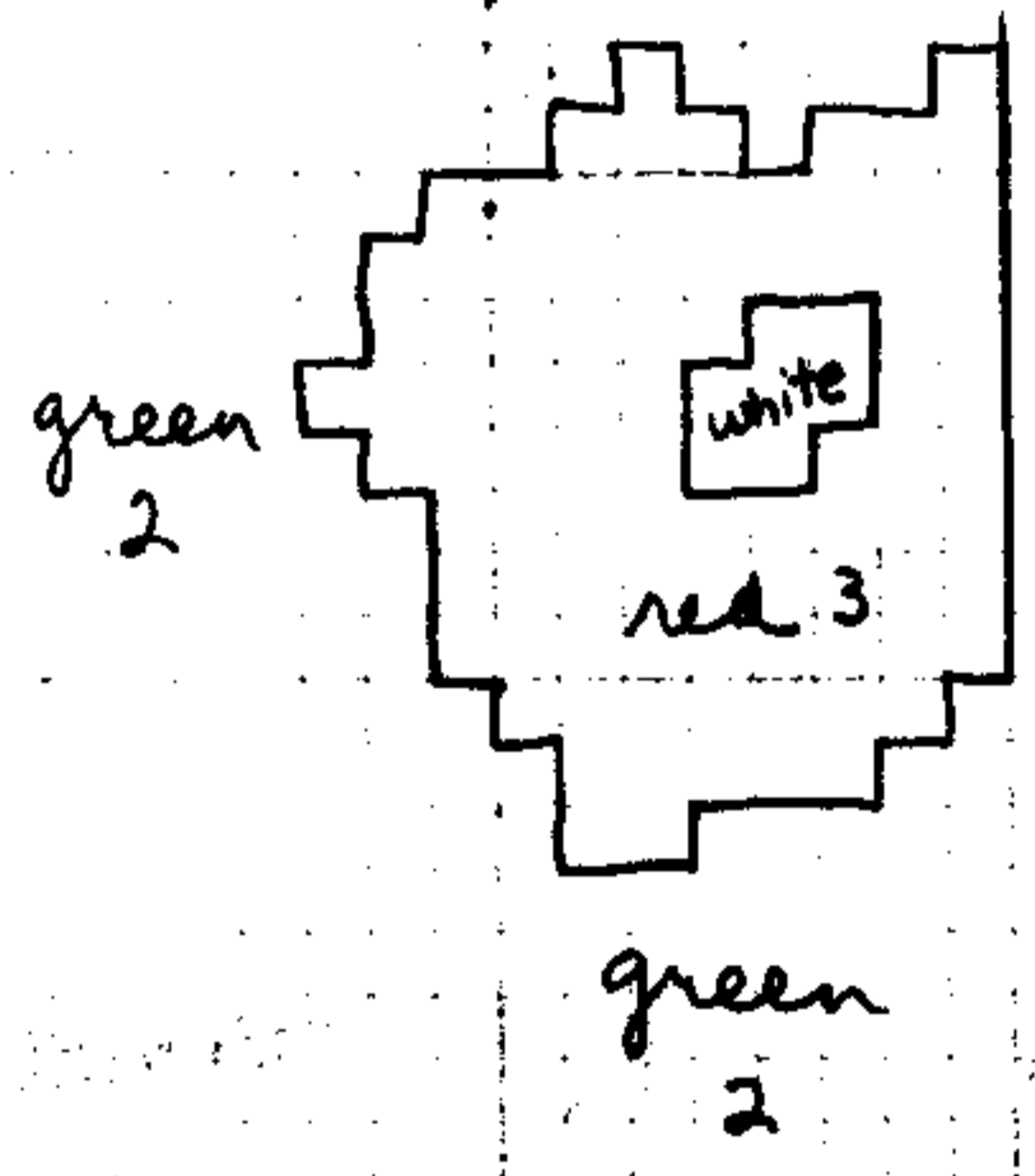
red 3

"nest" detail
(food choice)

hollow log

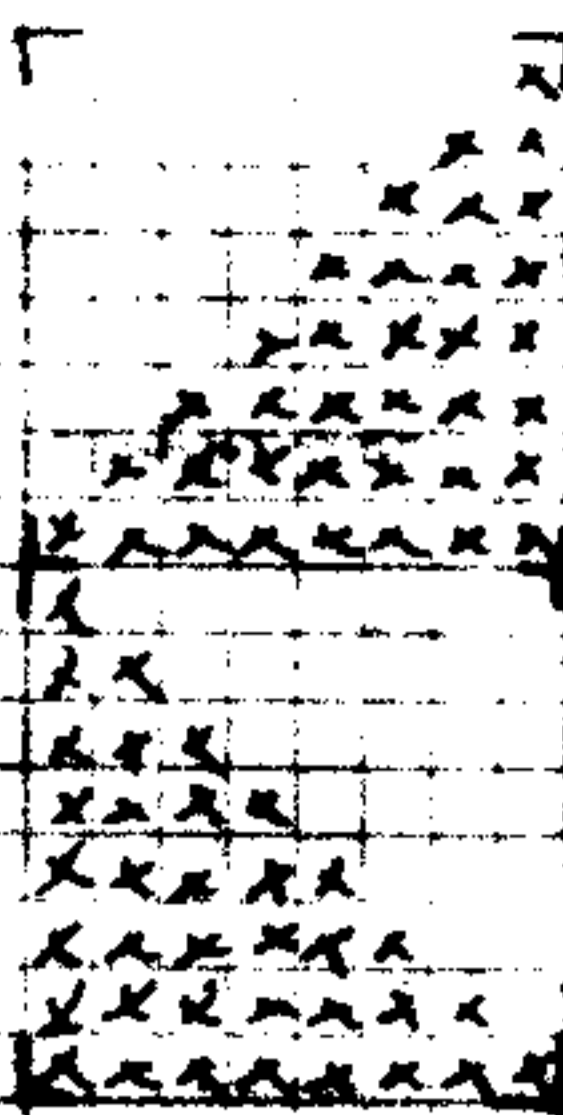
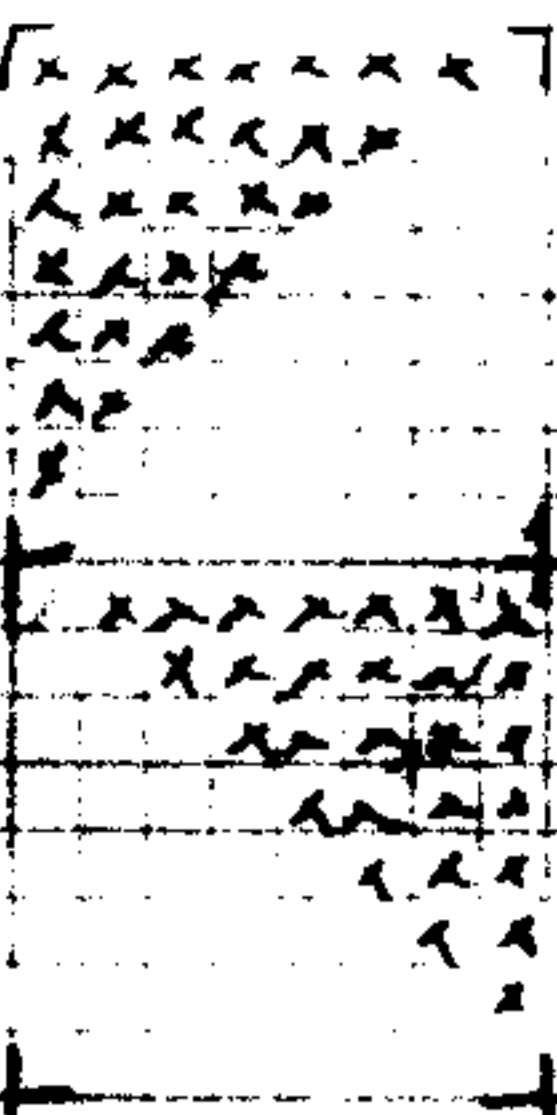
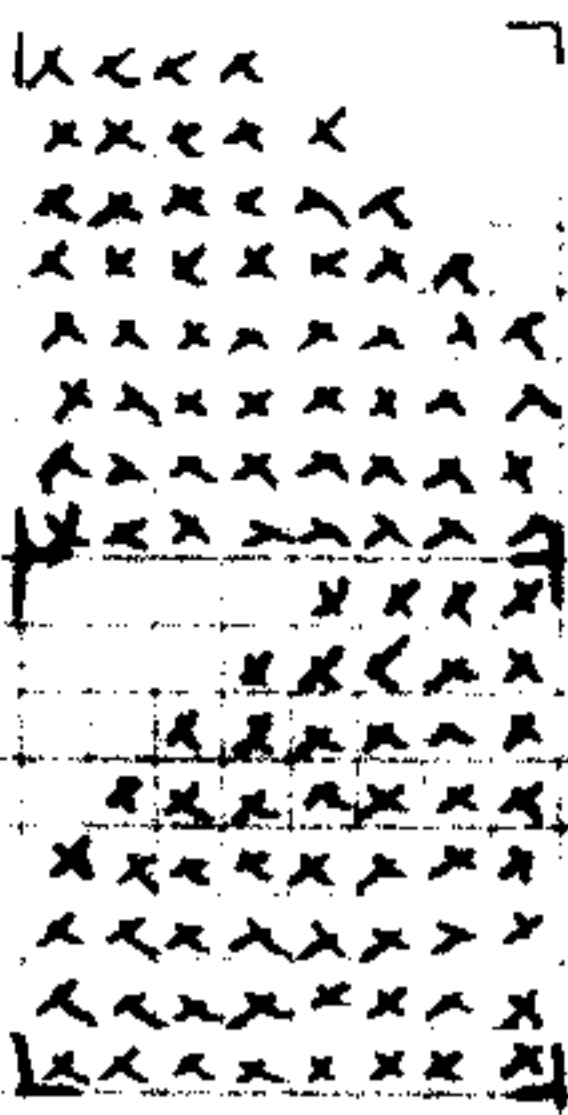


nest detail



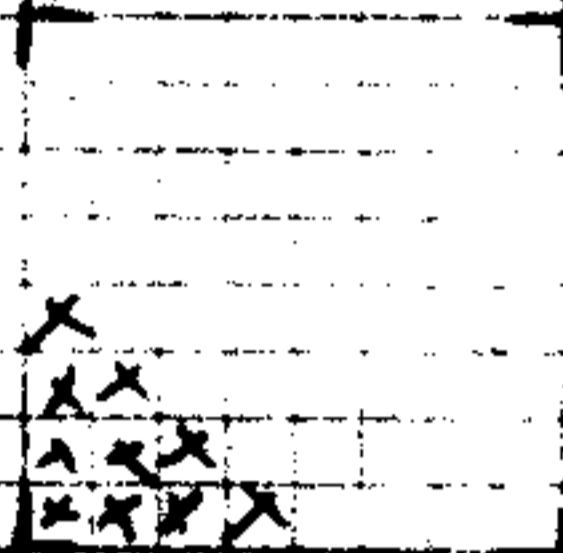
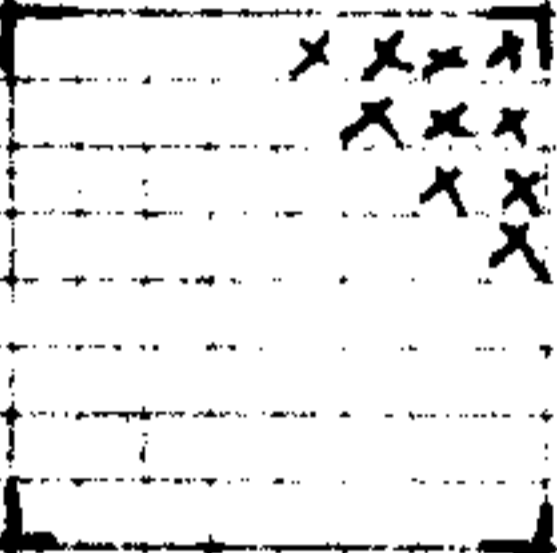
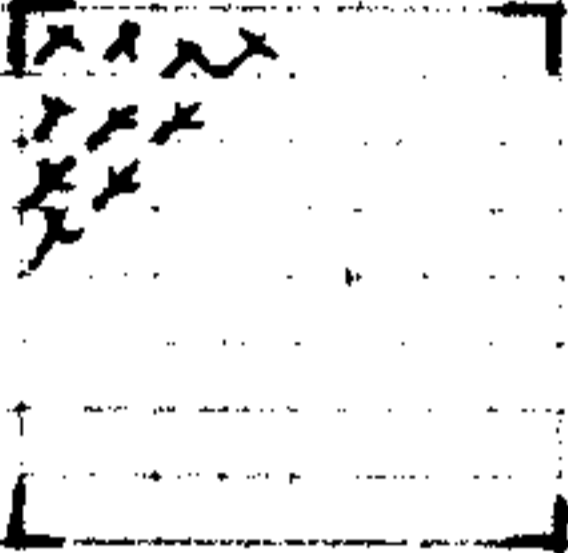
12

G4/G1



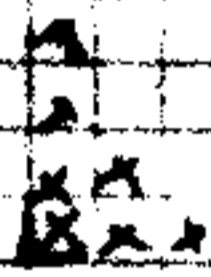
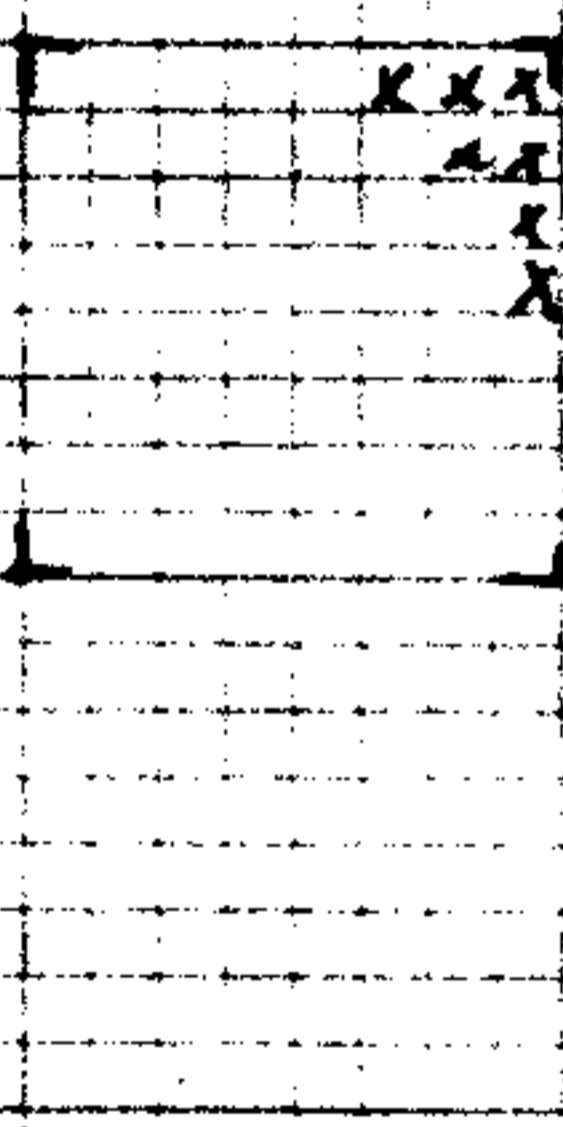
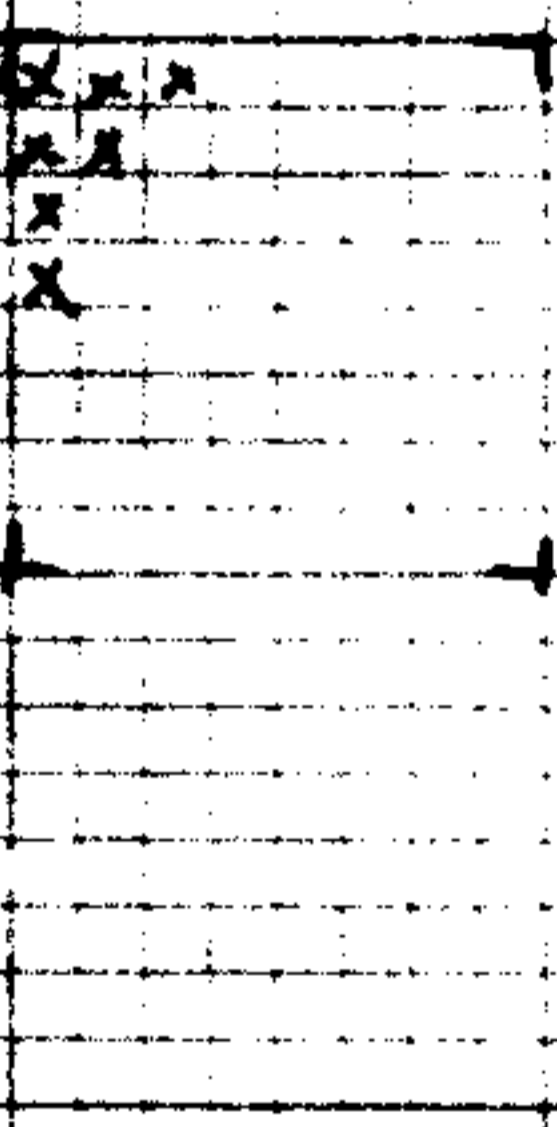
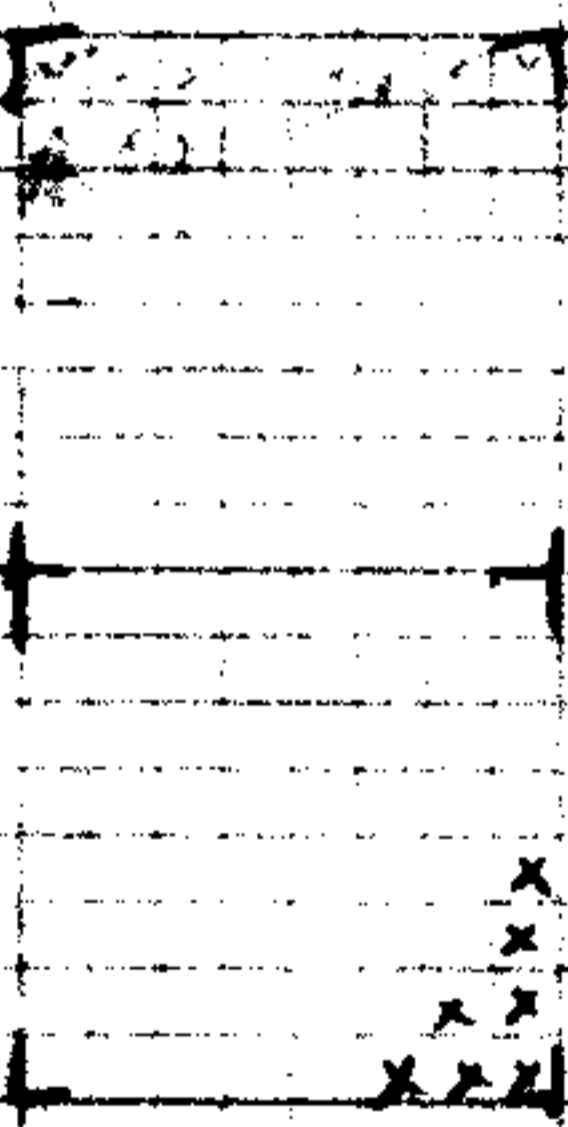
PF

B4/G1



15

B4/G1



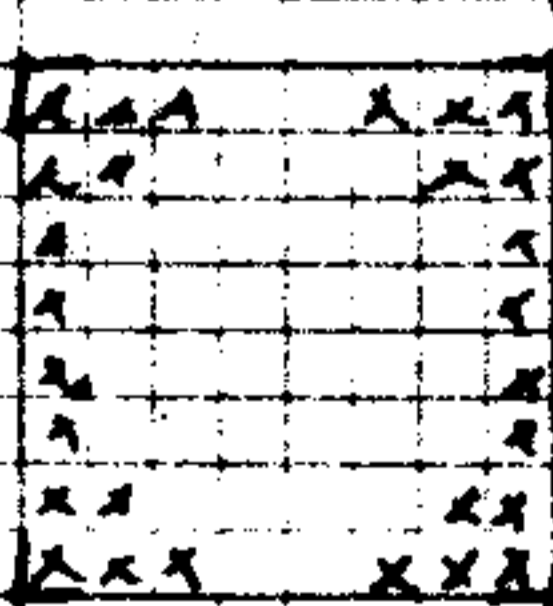
16

Y1/G1



17

Y1/G1



(18)

XXXXXXXXXX
XXXXXXXXXX
XXXXXXXXXX
XXXXXXXXXX
XXXXXXXXXX
XXXXXXXXXX

B1/G2

(19)

R2/R2

(1A)

XXXXXXXXXX
XXXXXXXXXX
XXXXXXXXXX

WH/G1

(1B)

XXXXXXXXXX
XXXXXXXXXX
XXXXXXXXXX

Y2/G1

(1A)

MG/G1

XXXXXXXXXX
XXXXXXXXXX
XXXXXXXXXX
XXXXXXXXXX

View Screen
#4-7

(2)

Home Screen

0 out
6 game

1

SET: >00

CLR: >CY/Yd

SET: >01

CLR: >RL/Yd

SET: >02

CLR: >RL/Yd

SET: >03

CLR: >RL/Yd

| | | | | | | | | | | | |
|-----|-------|-------|-----|-------|--------|-----|-------|----|-----|-------|----|
| >00 | >0800 | BLOCK | >08 | >0840 | Border | >10 | >0880 | | >18 | >08C0 | ET |
| >01 | >0808 | VCIU | >09 | >0848 | | >11 | >0888 | | >19 | >08C8 | |
| >02 | >0810 | BLOCK | >0A | >0850 | | >12 | >0890 | ET | >1A | >08D0 | |
| >03 | >0818 | | >0B | >0858 | | >13 | >0898 | | >1B | >08D8 | |
| >04 | >0820 | Home | >0C | >0860 | | >14 | >08A0 | | >1C | >08E0 | |
| >05 | >0828 | | >0D | >0868 | | >15 | >08A8 | | >1D | >08E8 | |
| >06 | >0830 | COMPS | >0E | >0870 | | >16 | >08B0 | | >1E | >08F0 | |
| >07 | >0838 | | >0F | >0878 | | >17 | >08B8 | | >1F | >08F8 | |

SET: >04

CLR: >RL/WH

SET: >05 (WH/Gd)

CLR: >RL/WH

SET: >06

CLR: >RL/WH

SET: >07

CLR: >RL/WH

| | | | | | | | | | | | |
|-----|-------|-------|-----|-------|------------|-----|-------|---|-----|-------|---|
| >20 | >0900 | SPACE | >28 | >0940 | (lily pad) | >30 | >0980 | 0 | >38 | >09C0 | |
| >21 | >0908 | | >29 | >0948 | | >31 | >0988 | | >39 | >09C8 | 9 |
| >22 | >0910 | | >2A | >0950 | | >32 | >0990 | | >3A | >09D0 | |
| >23 | >0918 | | >2B | >0958 | | >33 | >0998 | | >3B | >09D8 | |
| >24 | >0920 | | >2C | >0960 | | >34 | >09A0 | | >3C | >09E0 | |
| >25 | >0928 | | >2D | >0968 | | >35 | >09A8 | | >3D | >09E8 | |
| >26 | >0930 | | >2E | >0970 | | >36 | >09B0 | | >3E | >09F0 | |
| >27 | >0938 | | >2F | >0978 | | >37 | >09B8 | | >3F | >09F8 | |

SET: >08

CLR: >RL/WH

SET: >09

CLR: >RL/WH

SET: >0A

CLR: >RL/WH

SET: >0B

CLR: >RL/WH

| | | | | | | | | | | | |
|-----|-------|---|-----|-------|---|-----|-------|---|-----|-------|---|
| >40 | >0A00 | e | >48 | >0A40 | H | >50 | >0AB0 | P | >58 | >0AC0 | X |
| >41 | >0A08 | A | >49 | >0A48 | | >51 | >0AB8 | | >59 | >0AC8 | |
| >42 | >0A10 | | >4A | >0A50 | | >52 | >0A90 | | >5A | >0AD0 | Y |
| >43 | >0A18 | | >4B | >0A58 | | >53 | >0A98 | | >5B | >0AD8 | T |
| >44 | >0A20 | | >4C | >0A60 | | >54 | >0AA0 | | >5C | >0AE0 | |
| >45 | >0A28 | | >4D | >0A68 | | >55 | >0AA8 | | >5D | >0AE8 | |
| >46 | >0A30 | | >4E | >0A70 | | >56 | >0AB0 | | >5E | >0AF0 | |
| >47 | >0A38 | | >4F | >0A78 | | >57 | >0AB8 | | >5F | >0AF8 | |

SET: >0C

CLR: >Gd/Yd

SET: >0D

CLR: >Gd/Yd

SET: >0E

CLR: >Gd/Yd

SET: >0F

CLR: >Gd/Yd

| | | | | | | | | | | | |
|-----|-------|-------|-----|-------|----------|-----|-------|-------|-----|-------|-------|
| >60 | >0B00 | BLOCK | >68 | >0B40 | Trees | >70 | >0BB0 | BLOCK | >78 | >0BC0 | Trees |
| >61 | >0B08 | | >69 | >0B48 | | >71 | >0BB8 | | >79 | >0BC8 | |
| >62 | >0B10 | Trees | >6A | >0B50 | Tree | >72 | >0B90 | Trees | >7A | >0BD0 | |
| >63 | >0B18 | | >6B | >0B58 | | >73 | >0B98 | | >7B | >0BD8 | |
| >64 | >0B20 | | >6C | >0B60 | branches | >74 | >0BA0 | | >7C | >0BE0 | |
| >65 | >0B28 | | >6D | >0B68 | | >75 | >0BA8 | | >7D | >0BE8 | |
| >66 | >0B30 | | >6E | >0B70 | | >76 | >0BB0 | | >7E | >0BF0 | |
| >67 | >0B38 | | >6F | >0B78 | | >77 | >0BB8 | | >7F | >0BF8 | |

Home Screen

(2)

SET: >10
CLR: >R1/Y2

SET: >11
CLR: >R3/Y2

SET: >12
CLR: >WH/Y2

SET: >13
CLR: >MG/W1

| | | | | | | | | | | | |
|-----|-------|--------|-----|-------|----------|-----|-------|----------|-----|-------|----------|
| >80 | >0C00 | Trunks | >88 | >0C40 | Trunks | >90 | >0C80 | Pedestal | >98 | >0CC0 | Pedestal |
| >81 | >0C08 | | >89 | >0C48 | | >91 | >0C88 | | >99 | >0CC8 | |
| >82 | >0C10 | | >8A | >0C50 | | >92 | >0C90 | | >9A | >0CD0 | |
| >83 | >0C18 | | >8B | >0C58 | Tree | >93 | >0C98 | | >9B | >0CD8 | |
| >84 | >0C20 | | >8C | >0C60 | branches | >94 | >0CA0 | | >9C | >0CE0 | |
| >85 | >0C28 | | >8D | >0C68 | | >95 | >0CA8 | | >9D | >0CE8 | |
| >86 | >0C30 | | >8E | >0C70 | | >96 | >0CB0 | | >9E | >0CF0 | |
| >87 | >0C38 | | >8F | >0C78 | | >97 | >0CB8 | | >9F | >0CF8 | |

Cave

SET: >14
CLR: >G2/G3

SET: >15
CLR: >G2/GY

SET: >16
CLR: >G2/GY

SET: >17
CLR: >WH/GY

| | | | | | | | | | | | |
|-----|-------|-------|-----|-------|-----------|-----|-------|-----------|-----|-------|------|
| >A0 | >0D00 | Trees | >AB | >0D40 | Tree/Cave | >B0 | >0DB0 | Tree/Cave | >BB | >0DC0 | VOID |
| >A1 | >0D08 | | >A9 | >0D48 | | >B1 | >0DB8 | | >B9 | >0DC8 | Rock |
| >A2 | >0D10 | | >AA | >0D50 | | >B2 | >0D90 | | >BA | >0DD0 | |
| >A3 | >0D18 | | >AB | >0D58 | | >B3 | >0D98 | | >BB | >0DD8 | |
| >A4 | >0D20 | | >AC | >0D60 | | >B4 | >0DA0 | | >BC | >0DE0 | |
| >A5 | >0D28 | | >AD | >0D68 | | >B5 | >0DA8 | | >BD | >0DE8 | |
| >A6 | >0D30 | | >AE | >0D70 | | >B6 | >0DB0 | | >BE | >0DF0 | |
| >A7 | >0D38 | | >AF | >0D78 | | >B7 | >0DB8 | | >BF | >0DF8 | |

SET: >18
CLR: >R2/GY

SET: >19
CLR: >R2/GY

SET: >1A
CLR: >R2/R2

Tree
SET: >1B
CLR: >G2/Y2

| | | | | | | | | | | | |
|-----|-------|-----------|-----|-------|-----------|-----|-------|-----------|-----|-------|------|
| >C0 | >0E00 | Door/Cave | >CB | >0E40 | Hole/Cave | >D0 | >0EB0 | Hole/Door | >DB | >0EC0 | |
| >C1 | >0E08 | | >C9 | >0E48 | | >D1 | >0EB8 | | >D9 | >0EC8 | Tree |
| >C2 | >0E10 | | >CA | >0E50 | | >D2 | >0E90 | | >DA | >0ED0 | |
| >C3 | >0E18 | | >CB | >0E58 | | >D3 | >0E98 | | >DB | >0ED8 | |
| >C4 | >0E20 | | >CC | >0E60 | | >D4 | >0EA0 | | >DC | >0EE0 | |
| >C5 | >0E28 | | >CD | >0E68 | | >D5 | >0EA8 | | >DB | >0EE8 | |
| >C6 | >0E30 | | >CE | >0E70 | | >D6 | >0EB0 | | >DE | >0EF0 | |
| >C7 | >0E38 | | >CF | >0E78 | | >D7 | >0EB8 | | >DF | >0EF8 | |

Lake

SET: >1C
CLR: >R2/R3

SET: >1D
CLR: >R1/Y2

SET: >1E
CLR: >WH/R1

SET: >1F
CLR: >G2/E1

| | | | | | | | | | | | |
|-----|-------|-------|-----|-------|------|-----|-------|------|-----|-------|--------|
| >E0 | >0F00 | VOID | >EB | >0F40 | | >F0 | >0FB0 | VOID | >FB | >0FC0 | |
| >E1 | >0F08 | | >E9 | >0F48 | | >F1 | >0FB8 | Wave | >F9 | >0FC8 | |
| >E2 | >0F10 | Trunk | >EA | >0F50 | Lake | >F2 | >0F90 | | >FA | >0FD0 | Island |
| >E3 | >0F18 | | >EB | >0F58 | | >F3 | >0F98 | | >FB | >0FD8 | |
| >E4 | >0F20 | | >EC | >0F60 | | >F4 | >0FA0 | | >FC | >0FE0 | |
| >E5 | >0F28 | | >ED | >0F68 | | >F5 | >0FAB | | >FD | >0FE8 | |
| >E6 | >0F30 | | >EE | >0F70 | | >F6 | >0FB0 | | >FE | >0FF0 | |
| >E7 | >0F38 | | >EF | >0F78 | | >F7 | >0FB8 | | >FF | >0FF8 | |

Home Screen

3

SET: >10
CLR: >

SET: >11
CLR: >

SET: >12
CLR: >

SET: >13
CLR: >

| | | | | | | | | | | | |
|-----|-------|--|-----|-------|--|-----|-------|--|-----|-------|--|
| >80 | >0C00 | | >88 | >0C40 | | >90 | >0C80 | | >98 | >0CC0 | |
| >81 | >0C08 | | >89 | >0C48 | | >91 | >0C88 | | >99 | >0CC8 | |
| >82 | >0C10 | | >8A | >0C50 | | >92 | >0C90 | | >9A | >0CD0 | |
| >83 | >0C18 | | >8B | >0C58 | | >93 | >0C98 | | >9B | >0CD8 | |
| >84 | >0C20 | | >8C | >0C60 | | >94 | >0CA0 | | >9C | >0CE0 | |
| >85 | >0C28 | | >8D | >0C68 | | >95 | >0CAB | | >9D | >0CE8 | |
| >86 | >0C30 | | >8E | >0C70 | | >96 | >0CB0 | | >9E | >0CF0 | |
| >87 | >0C38 | | >8F | >0C78 | | >97 | >0CB8 | | >9F | >0CF8 | |

SET: >14
CLR: >

SET: >15
CLR: >

SET: >16
CLR: >

SET: >17
CLR: >

| | | | | | | | | | | | |
|-----|-------|--|-----|-------|--|-----|-------|--|-----|-------|--|
| >A0 | >0D00 | | >A8 | >0D40 | | >B0 | >0D80 | | >BB | >0DC0 | |
| >A1 | >0D08 | | >A9 | >0D48 | | >B1 | >0D88 | | >B9 | >0DC8 | |
| >A2 | >0D10 | | >AA | >0D50 | | >B2 | >0D90 | | >BA | >0DD0 | |
| >A3 | >0D18 | | >AB | >0D58 | | >B3 | >0D98 | | >BB | >0DD8 | |
| >A4 | >0D20 | | >AC | >0D60 | | >B4 | >0DA0 | | >BC | >0DE0 | |
| >A5 | >0D28 | | >AD | >0D68 | | >B5 | >0DAB | | >BD | >0DE8 | |
| >A6 | >0D30 | | >AE | >0D70 | | >B6 | >0DB0 | | >BE | >0DF0 | |
| >A7 | >0D38 | | >AF | >0D78 | | >B7 | >0DB8 | | >BF | >0DF8 | |

SET: >18
CLR: >

SET: >19
CLR: >

SET: >1A
CLR: >

SET: >1B
CLR: >Gd/Yd

| | | | | | | | | | | | |
|-----|-------|--|-----|-------|--|-----|-------|--|-----|-------|---------------|
| >C0 | >0E00 | | >C8 | >0E40 | | >D0 | >0E80 | | >DB | >0EC0 | |
| >C1 | >0E08 | | >C9 | >0E48 | | >D1 | >0E88 | | >D9 | >0EC8 | |
| >C2 | >0E10 | | >CA | >0E50 | | >D2 | >0E90 | | >DA | >0ED0 | |
| >C3 | >0E18 | | >CB | >0E58 | | >D3 | >0E98 | | >DB | >0ED8 | |
| >C4 | >0E20 | | >CC | >0E60 | | >D4 | >0EA0 | | >DC | >0EE0 | |
| >C5 | >0E28 | | >CD | >0E68 | | >D5 | >0EAB | | >DD | >0EE8 | |
| >C6 | >0E30 | | >CE | >0E70 | | >D6 | >0EB0 | | >DE | >0EF0 | <u>Gd/Sky</u> |
| >C7 | >0E38 | | >CF | >0E78 | | >D7 | >0EB8 | | >DF | >0EF8 | |

Hole

SET: >1C
CLR: >R1/R2

SET: >1D
CLR: >R2/Y2

SET: >1E
CLR: >R1/G2

SET: >1F
CLR: >Gd/R2

| | | | | | | | | | | | |
|-----|-------|--|-----|-------|--|-----|-------|--|-----|-------|--|
| >E0 | >0F00 | | >E8 | >0F40 | | >F0 | >0FB0 | | >FB | >0FC0 | |
| >E1 | >0F08 | | >E9 | >0F48 | | >F1 | >0FB8 | | >F9 | >0FC8 | |
| >E2 | >0F10 | | >EA | >0F50 | | >F2 | >0F90 | | >FA | >0FD0 | |
| >E3 | >0F18 | | >EB | >0F58 | | >F3 | >0F98 | | >FB | >0FD8 | |
| >E4 | >0F20 | | >EC | >0F60 | | >F4 | >0FA0 | | >FC | >0FE0 | |
| >E5 | >0F28 | | >ED | >0F68 | | >F5 | >0FAB | | >FD | >0FE8 | |
| >E6 | >0F30 | | >EE | >0F70 | | >F6 | >0FB0 | | >FE | >0FF0 | |
| >E7 | >0F38 | | >EF | >0F78 | | >F7 | >0FB8 | | >FF | >0FF8 | |

Handwritten notes:
 - >E8: Ground
 - >E9: Sky
 - >F0: Hole
 - >F1: Ground
 - >F2: Ground
 - >FB: Ground
 - >E5: Hole
 - >E6: Ground

Food Screen

1

| SET: >00 CLR: >XY/Yd | SET: >01 CLR: >ZV/Yd | SET: >02 CLR: >ZL/Yd | SET: >03 CLR: >ZL/Yd |
|---------------------------|---------------------------|---------------------------|----------------------------|
| >00 >0B00 <u>Some</u> | >08 >0B40 <u>Some</u> | >10 >0B80 <u>Some</u> | >18 >0BC0 <u>Some</u> |
| >01 >0B08 <u>Some</u> | >09 >0B48 | >11 >0B88 <u>Some</u> | >19 >0BC8 <u>Some</u> |
| >02 >0B10 | >0A >0B50 | >12 >0B90 | >1A >0BD0 |
| >03 >0B18 | >0B >0B58 | >13 >0B98 | >1B >0BD8 <u>Spots</u> |
| >04 >0B20 | >0C >0B60 | >14 >0BA0 | >1C >0BE0 |
| >05 >0B28 | >0D >0B68 | >15 >0BA8 | >1D >0BE8 |
| >06 >0B30 | >0E >0B70 | >16 >0BB0 | >1E >0BF0 |
| >07 >0B38 | >0F >0B78 | >17 >0BB8 | >1F >0BF8 |

| SET: >04 CLR: >ZL/WH | SET: >05 (Yd/YI) CLR: >ZL/WH | SET: >06 CLR: >ZL/WH | SET: >07 CLR: >ZL/WH |
|-------------------------|---------------------------------|-------------------------|-------------------------|
| >20 >0900 | >28 >0940 <u>(Pna/PI)</u> | >30 >0980 | >38 >09C0 |
| >21 >0908 | >29 >0948 | >31 >0988 | >39 >09C8 |
| >22 >0910 | >2A >0950 | >32 >0990 | >3A >09D0 |
| >23 >0918 | >2B >0958 | >33 >0998 | >3B >09D8 |
| >24 >0920 | >2C >0960 | >34 >09A0 | >3C >09E0 |
| >25 >0928 | >2D >0968 | >35 >09A8 | >3D >09E8 |
| >26 >0930 | >2E >0970 | >36 >09B0 | >3E >09F0 |
| >27 >0938 | >2F >0978 | >37 >09B8 | >3F >09F8 |

| SET: >08 CLR: >ZL/WH | SET: >09 CLR: >ZL/WH | SET: >0A CLR: >ZL/WH | SET: >0B CLR: >ZL/WH |
|-------------------------|-------------------------|-------------------------|-------------------------|
| >40 >0A00 | >48 >0A40 | >50 >0A80 | >58 >0AC0 |
| >41 >0A08 | >49 >0A48 | >51 >0A88 | >59 >0AC8 |
| >42 >0A10 | >4A >0A50 | >52 >0A90 | >5A >0AD0 |
| >43 >0A18 | >4B >0A58 | >53 >0A98 | >5B >0AD8 |
| >44 >0A20 | >4C >0A60 | >54 >0AA0 | >5C >0AE0 |
| >45 >0A28 | >4D >0A68 | >55 >0AA8 | >5D >0AE8 |
| >46 >0A30 | >4E >0A70 | >56 >0AB0 | >5E >0AF0 |
| >47 >0A38 | >4F >0A78 | >57 >0AB8 | >5F >0AF8 |

| SET: >0C CLR: >Gd/Yd | SET: >0D CLR: >Gd/Yd | SET: >0E CLR: >Gd/Yd | SET: >0F CLR: >Gd/Yd |
|---------------------------|----------------------------|---------------------------|----------------------------|
| >60 >0B00 <u>Some</u> | >68 >0B40 <u>Some</u> | >70 >0B80 | >78 >0BC0 <u>Some</u> |
| >61 >0B08 <u>Some</u> | >69 >0B48 <u>Some</u> | >71 >0B88 <u>Some</u> | >79 >0BC8 <u>Some</u> |
| >62 >0B10 | >6A >0B50 <u>New</u> | >72 >0B90 <u>Some</u> | >7A >0BD0 <u>New</u> |
| >63 >0B18 | >6B >0B58 <u>Trees</u> | >73 >0B98 | >7B >0BD8 <u>Trees</u> |
| >64 >0B20 | >6C >0B60 | >74 >0BA0 | >7C >0BE0 |
| >65 >0B28 | >6D >0B68 | >75 >0BA8 | >7D >0BE8 |
| >66 >0B30 | >6E >0B70 | >76 >0BB0 | >7E >0BF0 |
| >67 >0B38 | >6F >0B78 | >77 >0BB8 | >7F >0BF8 |

Food Screen

9

SET: >10
CLR: >R1/Y2

SET: >11
CLR: >R2/Y2

SET: >12
CLR: >W1/Y2

SET: >13
CLR: >W2/WH

| | | | | | | | | | | | |
|-----|-------|------|-----|-------|------|-----|-------|------|-----|-------|------|
| >80 | >0C00 | Same | >88 | >0C40 | Same | >90 | >0CB0 | Same | >98 | >0CC0 | Same |
| >81 | >0C08 | | >89 | >0C48 | | >91 | >0CB8 | | >99 | >0CC8 | |
| >82 | >0C10 | | >8A | >0C50 | | >92 | >0C90 | | >9A | >0CD0 | |
| >83 | >0C18 | | >8B | >0C58 | | >93 | >0C98 | | >9B | >0CD8 | |
| >84 | >0C20 | | >8C | >0C60 | | >94 | >0CA0 | | >9C | >0CE0 | |
| >85 | >0C28 | | >8D | >0C68 | | >95 | >0CAB | | >9D | >0CE8 | |
| >86 | >0C30 | | >8E | >0C70 | | >96 | >0CB0 | | >9E | >0CF0 | |
| >87 | >0C38 | | >8F | >0C78 | | >97 | >0CB8 | | >9F | >0CF8 | |

Leaves

Fish

SET: >14
CLR: >G2/GY

SET: >15
CLR: >G3/GY

SET: >16
CLR: >R1/GY

SET: >17
CLR: >R1/GY

| | | | | | | | | | | | |
|-----|-------|--------|-----|-------|--------|-----|-------|-------|-----|-------|-------|
| >A0 | >0D00 | | >A8 | >0D40 | | >B0 | >0DB0 | Block | >B8 | >0DC0 | |
| >A1 | >0D08 | Leaves | >A9 | >0D48 | Leaves | >B1 | >0DB8 | VOID | >B9 | >0DC8 | Tail |
| >A2 | >0D10 | | >AA | >0D50 | | >B2 | >0D90 | | >BA | >0DD0 | |
| >A3 | >0D18 | | >AB | >0D58 | | >B3 | >0D98 | Fin | >BB | >0DD8 | |
| >A4 | >0D20 | | >AC | >0D60 | | >B4 | >0DA0 | | >BC | >0DE0 | |
| >A5 | >0D28 | | >AD | >0D68 | | >B5 | >0DAB | | >BD | >0DE8 | MOUTH |
| >A6 | >0D30 | | >AE | >0D70 | | >B6 | >0DB0 | Fin | >BE | >0DF0 | |
| >A7 | >0D38 | | >AF | >0D78 | | >B7 | >0DB8 | | >BF | >0DF8 | |

Banana

SET: >18
CLR: >G1/GY

SET: >19
CLR: >G1/GY

SET: >1A
CLR: >G1/G1

SET: >1B
CLR: >H1/GY

| | | | | | | | | | | | |
|-----|-------|-------|-----|-------|------|-----|-------|-------|-----|-------|--------|
| >C0 | >0E00 | Block | >C8 | >0E40 | | >D0 | >0EB0 | Block | >D8 | >0EC0 | |
| >C1 | >0E08 | | >C9 | >0E48 | Fish | >D1 | >0EB8 | FIN | >D9 | >0EC8 | Banana |
| >C2 | >0E10 | Fish | >CA | >0E50 | | >D2 | >0E90 | EYE | >DA | >0ED0 | |
| >C3 | >0E18 | | >CB | >0E58 | | >D3 | >0E98 | | >DB | >0ED8 | |
| >C4 | >0E20 | | >CC | >0E60 | | >D4 | >0EA0 | | >DC | >0EE0 | |
| >C5 | >0E28 | | >CD | >0E68 | | >D5 | >0EAB | | >DD | >0EE8 | |
| >C6 | >0E30 | | >CE | >0E70 | | >D6 | >0EB0 | | >DE | >0EF0 | |
| >C7 | >0E38 | | >CF | >0E78 | | >D7 | >0EB8 | | >DF | >0EF8 | |

SET: >1C
CLR: >Y2/GY

SET: >1D
CLR: >Y2/GY

SET: >1E
CLR: >Y2/GY

SET: >1F
CLR: >E1/GY

| | | | | | | | | | | | |
|-----|-------|-------|-----|-------|------|-----|-------|------|-----|-------|-----|
| >E0 | >0F00 | Block | >E8 | >0F40 | PEEL | >F0 | >0FB0 | PEEL | >F8 | >0FC0 | Tip |
| >E1 | >0F08 | | >E9 | >0F48 | | >F1 | >0FB8 | | >F9 | >0FC8 | |
| >E2 | >0F10 | PEEL | >EA | >0F50 | | >F2 | >0F90 | | >FA | >0FD0 | |
| >E3 | >0F18 | | >EB | >0F58 | | >F3 | >0F98 | | >FB | >0FD8 | |
| >E4 | >0F20 | | >EC | >0F60 | | >F4 | >0FA0 | | >FC | >0FE0 | |
| >E5 | >0F28 | | >ED | >0F68 | | >F5 | >0FAB | | >FD | >0FEB | |
| >E6 | >0F30 | | >EE | >0F70 | | >F6 | >0FB0 | | >FE | >0FF0 | |
| >E7 | >0F38 | | >EF | >0F78 | | >F7 | >0FB8 | | >FF | >0FF8 | |

Food Screen

2

| SET: >10 CLR: > | SET: >11 CLR: > | SET: >12 CLR: > | SET: >13 CLR: > |
|--------------------|--------------------|--------------------|--------------------|
| >80 >0C00 | >88 >0C40 | >90 >0C80 | >98 >0CC0 |
| >81 >0C08 | >89 >0C48 | >91 >0C88 | >99 >0CC8 |
| >82 >0C10 | >8A >0C50 | >92 >0C90 | >9A >0CCD |
| >83 >0C18 | >8B >0C58 | >93 >0C98 | >9B >0CDB |
| >84 >0C20 | >8C >0C60 | >94 >0CA0 | >9C >0CE0 |
| >85 >0C28 | >8D >0C68 | >95 >0CAB | >9D >0CEB |
| >86 >0C30 | >8E >0C70 | >96 >0CB0 | >9E >0CF0 |
| >87 >0C38 | >8F >0C78 | >97 >0CBB | >9F >0CFB |

| SET: >14 CLR: > | SET: >15 CLR: > | SET: >16 CLR: > | SET: >17 CLR: > |
|--------------------|--------------------|--------------------|--------------------|
| >A0 >0D00 | >AB >0D40 | >B0 >0DB0 | >BB >0DC0 |
| >A1 >0D08 | >A9 >0D48 | >B1 >0DB8 | >B9 >0DCB |
| >A2 >0D10 | >AA >0D50 | >B2 >0D90 | >BA >0DD0 |
| >A3 >0D18 | >AB >0D58 | >B3 >0D98 | >BB >0DD8 |
| >A4 >0D20 | >AC >0D60 | >B4 >0DA0 | >BC >0DE0 |
| >A5 >0D28 | >AD >0D68 | >B5 >0DAB | >BD >0DEB |
| >A6 >0D30 | >AE >0D70 | >B6 >0DB0 | >BE >0DF0 |
| >A7 >0D38 | >AF >0D78 | >B7 >0DB8 | >BF >0DFB |

| SET: >18 CLR: > | SET: >19 CLR: > | SET: >1A CLR: > | SET: >1B CLR: >WH/GY |
|--------------------|--------------------|--------------------|-------------------------|
| >C0 >0E00 | >CB >0E40 | >D0 >0EB0 | >DB >0EC0 MEAT |
| >C1 >0E08 | >C9 >0E48 | >D1 >0EB8 | >D9 >0ECB |
| >C2 >0E10 | >CA >0E50 | >D2 >0E90 | >DA >0ED0 |
| >C3 >0E18 | >CB >0E58 | >D3 >0E98 | >DB >0ED8 |
| >C4 >0E20 | >CC >0E60 | >D4 >0EA0 | >DC >0EE0 |
| >C5 >0E28 | >CD >0E68 | >D5 >0EAB | >DD >0EEB |
| >C6 >0E30 | >CE >0E70 | >D6 >0EB0 | >DE >0EF0 |
| >C7 >0E38 | >CF >0E78 | >D7 >0EB8 | >DF >0EFB |

Steak

| SET: >1C CLR: >R1/WH | SET: >1D CLR: >R1/WH | SET: >1E CLR: >R2/WH | SET: >1F CLR: >R2/GY |
|-------------------------|-------------------------|-------------------------|-------------------------|
| >E0 >0F00 PLOCH | >E8 >0F40 | >F0 >0FB0 FAT | >FB >0FC0 |
| >E1 >0F08 | >E9 >0F48 BONE | >F1 >0FB8 | >F9 >0FCB FAT |
| >E2 >0F10 ROUE | >EA >0F50 | >F2 >0F90 MEAT | >FA >0FD0 |
| >E3 >0F18 | >EB >0F58 | >F3 >0F98 | >FB >0FDB |
| >E4 >0F20 | >EC >0F60 | >F4 >0FA0 | >FC >0FE0 |
| >E5 >0F28 | >ED >0F68 | >F5 >0FAB | >FD >0FEB |
| >E6 >0F30 | >EE >0F70 | >F6 >0FB0 | >FE >0FF0 |
| >E7 >0F38 | >EF >0F78 | >F7 >0FB8 | >FF >0FFB |

Predator

1

SET: >00
CLR: >C2/Y2

SET: >01
CLR: >E2/Y2

SET: >02
CLR: >L2/Y2

SET: >03
CLR: >R2/Y2

| | | | | | | | | | | | |
|-----|-------|------|-----|-------|------|-----|-------|------|-----|-------|------|
| >00 | >0800 | Same | >08 | >0840 | Same | >10 | >0880 | Same | >18 | >08C0 | Same |
| >01 | >0808 | | >09 | >0848 | | >11 | >0888 | | >19 | >08C8 | Log |
| >02 | >0810 | | >0A | >0850 | | >12 | >0890 | | >1A | >08D0 | |
| >03 | >0818 | | >0B | >0858 | | >13 | >0898 | | >1B | >08D8 | |
| >04 | >0820 | Home | >0C | >0860 | | >14 | >08A0 | | >1C | >08E0 | |
| >05 | >0828 | | >0D | >0868 | | >15 | >08A8 | | >1D | >08E8 | |
| >06 | >0830 | | >0E | >0870 | | >16 | >08B0 | | >1E | >08F0 | |
| >07 | >0838 | | >0F | >0878 | | >17 | >08B8 | | >1F | >08F8 | |

SET: >04
CLR: >L2/WH

SET: >05
CLR: >R2/WH

SET: >06
CLR: >L2/WH

SET: >07
CLR: >R2/WH

| | | | | | | | | | | | |
|-----|-------|--|-----|-------|--|-----|-------|--|-----|-------|--|
| >20 | >0900 | | >28 | >0940 | | >30 | >0980 | | >38 | >09C0 | |
| >21 | >0908 | | >29 | >0948 | | >31 | >0988 | | >39 | >09C8 | |
| >22 | >0910 | | >2A | >0950 | | >32 | >0990 | | >3A | >09D0 | |
| >23 | >0918 | | >2B | >0958 | | >33 | >0998 | | >3B | >09D8 | |
| >24 | >0920 | | >2C | >0960 | | >34 | >09A0 | | >3C | >09E0 | |
| >25 | >0928 | | >2D | >0968 | | >35 | >09A8 | | >3D | >09E8 | |
| >26 | >0930 | | >2E | >0970 | | >36 | >09B0 | | >3E | >09F0 | |
| >27 | >0938 | | >2F | >0978 | | >37 | >09B8 | | >3F | >09F8 | |

SET: >08
CLR: >L2/WH

SET: >09
CLR: >R2/WH

SET: >0A
CLR: >L2/WH

SET: >0B
CLR: >R2/WH

| | | | | | | | | | | | |
|-----|-------|--|-----|-------|--|-----|-------|--|-----|-------|--|
| >40 | >0A00 | | >48 | >0A40 | | >50 | >0A80 | | >58 | >0AC0 | |
| >41 | >0A08 | | >49 | >0A48 | | >51 | >0A88 | | >59 | >0AC8 | |
| >42 | >0A10 | | >4A | >0A50 | | >52 | >0A90 | | >5A | >0AD0 | |
| >43 | >0A18 | | >4B | >0A58 | | >53 | >0A98 | | >5B | >0AD8 | |
| >44 | >0A20 | | >4C | >0A60 | | >54 | >0AA0 | | >5C | >0AE0 | |
| >45 | >0A28 | | >4D | >0A68 | | >55 | >0AA8 | | >5D | >0AE8 | |
| >46 | >0A30 | | >4E | >0A70 | | >56 | >0AB0 | | >5E | >0AF0 | |
| >47 | >0A38 | | >4F | >0A78 | | >57 | >0AB8 | | >5F | >0AF8 | |

SET: >0C
CLR: >G2/Y2

SET: >0D
CLR: >G2/Y2

SET: >0E
CLR: >G2/Y2

SET: >0F
CLR: >R2/R3

| | | | | | | | | | | | |
|-----|-------|------|-----|-------|----------|-----|-------|------|-----|-------|-----|
| >60 | >0B00 | Same | >68 | >0B40 | | >70 | >0B80 | Same | >78 | >0BC0 | Log |
| >61 | >0B08 | | >69 | >0B48 | | >71 | >0B88 | | >79 | >0BC8 | |
| >62 | >0B10 | | >6A | >0B50 | Tree | >72 | >0B90 | | >7A | >0BD0 | |
| >63 | >0B18 | | >6B | >0B58 | | >73 | >0B98 | | >7B | >0BD8 | |
| >64 | >0B20 | | >6C | >0B60 | branches | >74 | >0BA0 | | >7C | >0BE0 | |
| >65 | >0B28 | | >6D | >0B68 | | >75 | >0BA8 | | >7D | >0BE8 | |
| >66 | >0B30 | | >6E | >0B70 | | >76 | >0BB0 | | >7E | >0BF0 | |
| >67 | >0B38 | | >6F | >0B78 | | >77 | >0BB8 | | >7F | >0BF8 | |

Prodator

Hole

2

SET: >10
CLR: >R1/Y2

SET: >11
CLR: >R2/Y2

SET: >12
CLR: >R3/Y2

SET: >13
CLR: >R4/G2

| | | | | | | | | | | | |
|-----|-------|------|-----|-------|----------|-----|-------|------|-----|-------|------|
| >80 | >0C00 | Some | >88 | >0C40 | Some | >90 | >0C80 | Some | >98 | >0CC0 | Some |
| >81 | >0C08 | | >89 | >0C48 | | >91 | >0C88 | | >99 | >0CC8 | |
| >82 | >0C10 | | >8A | >0C50 | | >92 | >0C90 | | >9A | >0CD0 | |
| >83 | >0C18 | | >8B | >0C58 | Tree | >93 | >0C98 | | >9B | >0CD8 | |
| >84 | >0C20 | | >8C | >0C60 | branches | >94 | >0CA0 | | >9C | >0CE0 | |
| >85 | >0C28 | | >8D | >0C68 | Log | >95 | >0CAB | | >9D | >0CE8 | |
| >86 | >0C30 | | >8E | >0C70 | | >96 | >0CB0 | | >9E | >0CF0 | |
| >87 | >0C38 | | >8F | >0C78 | | >97 | >0CB8 | | >9F | >0CF8 | |

Cave

SET: >14
CLR: >G2/R2

SET: >15
CLR: >G4/Y2

SET: >16
CLR: >G3/GY

SET: >17
CLR: >WH/GY

| | | | | | | | | | | | |
|-----|-------|------|-----|-------|------|-----|-------|------|-----|-------|------|
| >A0 | >0D00 | Some | >A8 | >0D40 | Cave | >B0 | >0DB0 | Some | >B8 | >0DC0 | Some |
| >A1 | >0D08 | | >A9 | >0D48 | | >B1 | >0DB8 | | >B9 | >0DC8 | |
| >A2 | >0D10 | | >AA | >0D50 | edge | >B2 | >0D90 | | >BA | >0DD0 | |
| >A3 | >0D18 | | >AB | >0D58 | | >B3 | >0D98 | | >BB | >0DD8 | |
| >A4 | >0D20 | | >AC | >0D60 | | >B4 | >0DA0 | | >BC | >0DE0 | |
| >A5 | >0D28 | | >AD | >0D68 | | >B5 | >0DAB | | >BD | >0DE8 | |
| >A6 | >0D30 | | >AE | >0D70 | | >B6 | >0DB0 | | >BE | >0DF0 | |
| >A7 | >0D38 | | >AF | >0D78 | | >B7 | >0DB8 | | >BF | >0DF8 | |

Tree

SET: >18
CLR: >L1/GY

SET: >19
CLR: >R4/GY

SET: >1A
CLR: >R4/G2

SET: >1B
CLR: >G2/Y2

| | | | | | | | | | | | |
|-----|-------|------|-----|-------|------|-----|-------|------|-----|-------|------|
| >C0 | >0E00 | Some | >C8 | >0E40 | Some | >D0 | >0EB0 | Some | >D8 | >0EC0 | Some |
| >C1 | >0E08 | | >C9 | >0E48 | | >D1 | >0EB8 | | >D9 | >0EC8 | |
| >C2 | >0E10 | | >CA | >0E50 | | >D2 | >0E90 | | >DA | >0ED0 | |
| >C3 | >0E18 | | >CB | >0E58 | | >D3 | >0E98 | | >DB | >0ED8 | |
| >C4 | >0E20 | | >CC | >0E60 | | >D4 | >0EA0 | | >DC | >0EE0 | |
| >C5 | >0E28 | | >CD | >0E68 | | >D5 | >0EAB | | >DD | >0EE8 | |
| >C6 | >0E30 | | >CE | >0E70 | | >D6 | >0EB0 | | >DE | >0EF0 | Hole |
| >C7 | >0E38 | | >CF | >0E78 | | >D7 | >0EB8 | | >DF | >0EF8 | |

Late

Log

SET: >1C
CLR: >R4/R3

SET: >1D
CLR: >R1/Y2

SET: >1E
CLR: >WH/R1

SET: >1F
CLR: >Y1/R3

| | | | | | | | | | | | |
|-----|-------|------|-----|-------|------|-----|-------|------|-----|-------|---------|
| >E0 | >0F00 | Some | >E8 | >0F40 | Some | >F0 | >0FB0 | Some | >F8 | >0FC0 | 4/10/10 |
| >E1 | >0F08 | | >E9 | >0F48 | | >F1 | >0FB8 | | >F9 | >0FC8 | |
| >E2 | >0F10 | | >EA | >0F50 | | >F2 | >0F90 | | >FA | >0FD0 | LOG |
| >E3 | >0F18 | | >EB | >0F58 | | >F3 | >0F98 | | >FB | >0FD8 | |
| >E4 | >0F20 | | >EC | >0F60 | | >F4 | >0FA0 | | >FC | >0FE0 | |
| >E5 | >0F28 | | >ED | >0F68 | | >F5 | >0FAB | | >FD | >0FE8 | |
| >E6 | >0F30 | Hole | >EE | >0F70 | | >F6 | >0FB0 | | >FE | >0FF0 | |
| >E7 | >0F38 | | >EF | >0F78 | | >F7 | >0FB8 | | >FF | >0FF8 | |


```

* ALIENS HATCHING IN "THE ATTACK"
HATCH DATA 5, >9F, >BF, >DF, >E7, >FF, 1
DATA 3, #>C402, >F4, 1
DATA 3, #>C502, >F3, 2
DATA 3, #>C402, >F2, 3
DATA 3, #>C302, >F1, 4
DATA 3, #>C402, >F0, 5
DATA 3, >E3, #>CA02, 5
DATA 3, #>CB02, >F0, 4
DATA 3, #>CA02, >F1, 3
DATA 3, #>CC02, >F1, 2
DATA 3, #>CA02, >F2, 1
DATA 3, #>CB01, >F0, 5
DATA 3, #>CB01, >F0, 4
DATA 3, #>CB01, >F1, 3
DATA 3, #>CD01, >F1, 2
DATA 3, #>CB01, >F2, 1
DATA 0, #OFF

* SAUCER SOUNDS IN "TI INVADERS"
SHSL BYTE 6, >9F, >B2, >DF, >FF, >A0, >08, 6 SAUCER HIT
BYTE 1, >B4, 4
BYTE 1, >B6, 3
BYTE 1, >B8, 2
BYTE 1, >BF, 0
S2HSL BYTE 6, >9F, >B2, >DF, >FF, >A0, >28, 6 SAUCER 2 HIT
BYTE 1, >B4, 4
BYTE 1, >B6, 3
BYTE 1, >B8, 2
S2MSL BYTE 7, >9F, >BF, >DF, >FF, >C0, >02, >E3, 1 SAUCER 2 MOVING
BYTE 1, >FE, 2
BYTE 1, >FC, 2
BYTE 1, >FA, 2
BYTE 1, >F8, 2
BYTE 1, >F6, 2
BYTE 1, >F4, 2
BYTE 1, >F2, 2
BYTE 1, >F0, 2
BYTE 0, >12, >11
SL2SL BYTE 7, >9F, >BF, >DF, >FF, >C0, >02, >E3, 2 SLOW SAUCER 2
BYTE 1, >FE, 4
BYTE 1, >FC, 4
BYTE 1, >FA, 4
BYTE 1, >F8, 4
BYTE 1, >F6, 4
BYTE 1, >F4, 4
BYTE 1, >F2, 4
BYTE 1, >F0, 4
BYTE 0, >12, >50
S1MSL BYTE 7, >9F, >BF, >DF, >FF, >C0, >06, >E3, 1 SAUCER 1 MOVING
BYTE 1, >FE, 2
BYTE 1, >FC, 2
BYTE 1, >FA, 2
BYTE 1, >F8, 2
BYTE 1, >F6, 2
BYTE 1, >F4, 2
BYTE 1, >F2, 2
BYTE 1, >F0, 2
BYTE 0, >13, >00

* "MUNCHMAN"
SNDEAT DATA 7, >9F, >BF, >DF, >F2, >CC, >01, >E7, 1 (3000-3013)
DATA 2, >CC, >03, 1
DATA 2, >CC, >05, 1

```

| | | |
|--------|--|---------------|
| | DATA 1, >FF, 0 | |
| SNDENZ | DATA 6, >9F, >DF, >FF, >A0, >08, >B2, 1 | (3014-3024) |
| | DATA 1, >B4, 1 | |
| | DATA 1, >B6, 1 | |
| | DATA 1, >BF, 0 | |
| SNDMUN | DATA 6, >9F, >BF, >FF, >C2, >1A, >DA, 1 | (3111-3123) |
| | DATA 2, >C2, >15, 1 | |
| | DATA 2, >C2, >10, 1 | |
| | DATA 1, >DF, 0 | |
| * | ALL SOUNDS FROM "PARSEC" | |
| SHPSND | DATA 4, >DF, >FF, >93, >B3, 1 | >3800 - |
| | DATA 4, >80, >3F, >AE, >3E, 60 | |
| | DATA 0, >00, >00 | |
| OFFSND | DATA 4, >9F, >BF, >DF, >FF, 0 | >380F - |
| SLWSND | DATA 5, >9F, >BF, >DF, >FC, >E7, 1 | >3815 - |
| | DATA 2, >C2, >05, 30 | |
| | DATA 0, >38, >1C | |
| FSTSND | DATA 5, >9F, >BF, >DF, >F6, >E7, 1 | >3823 - |
| | DATA 2, >C2, >05, 30 | |
| | DATA 0, >38, >2A | |
| EXPSND | DATA 7, >9F, >BF, >DF, >E7, >F0, >C0, >07, 5 | >3831 - |
| | DATA 1, >F1, 6 | |
| | DATA 1, >F2, 7 | |
| | DATA 1, >F3, 8 | |
| | DATA 1, >F4, 9 | |
| | DATA 1, >F5, 10 | |
| | DATA 1, >F6, 11 | |
| | DATA 1, >F7, 12 | |
| | DATA 1, >F8, 13 | |
| | DATA 1, >F9, 14 | |
| | DATA 1, >FA, 15 | |
| | DATA 1, >FB, 16 | |
| | DATA 1, >FC, 17 | |
| | DATA 1, >FD, 18 | |
| | DATA 1, >FE, 30 | |
| | DATA 1, >FF, 0 | |
| FIRSND | DATA 4, >9A, >BF, >DF, >FF, 1 | >3867 - >38A6 |
| | DATA 3, >80, >0A, >98, 1 | |
| | DATA 3, >80, >0C, >96, 1 | |
| | DATA 3, >80, >10, >94, 1 | |
| | DATA 3, >80, >14, >92, 1 | |
| | DATA 3, >80, >18, >90, 1 | |
| | DATA 3, >80, >1C, >92, 1 | |
| | DATA 3, >80, >20, >94, 1 | |
| | DATA 3, >80, >28, >96, 1 | |
| | DATA 3, >80, >30, >98, 1 | |
| | DATA 3, >80, >38, >9A, 1 | |
| | DATA 3, >80, >3E, >9C, 1 | |
| | DATA 1, >9F, 0 | |
| SW1SND | DATA 4, >99, >B9, >DF, >FF, 1 | >38A7 - >38CE |
| | DATA 4, >80, >20, >A2, >20, 10 | |
| | DATA 4, >80, >21, >A2, >21, 8 | |
| | DATA 4, >80, >22, >A2, >22, 6 | |
| | DATA 4, >80, >23, >A2, >23, 4 | |
| | DATA 4, >80, >24, >A2, >24, 2 | |
| | DATA 2, >9F, >BF, 0 | |
| SW2SND | DATA 4, >96, >FB, >DF, >FF, 1 | >38CF - >3917 |
| | DATA 2, >80, >30, 3 | |
| | DATA 2, >80, >31, 3 | |
| | DATA 2, >80, >32, 3 | |
| | DATA 2, >80, >33, 3 | |
| | DATA 2, >80, >34, 3 | |

DATA 2, >80, >35, 3
DATA 2, >80, >36, 3
DATA 2, >80, >37, 3
DATA 2, >80, >38, 3
DATA 2, >80, >39, 3
DATA 2, >80, >3A, 3
DATA 2, >80, >3B, 3
DATA 2, >80, >3C, 3
DATA 2, >80, >3D, 3
DATA 2, >80, >3E, 3
DATA 2, >80, >3F, 3
DATA 1, >9F, 0

SW3SND DATA 7, >9F, >BF, >DF, >FF, >C0, >05, >E3, 1 >3918 - >3947

DATA 1, >FC, 2
DATA 1, >FB, 2
DATA 1, >F4, 2
DATA 1, >F0, 2
DATA 1, >FC, 2
DATA 1, >FB, 2
DATA 1, >F4, 2
DATA 1, >F0, 2
DATA 1, >FC, 2
DATA 1, >FB, 2
DATA 1, >F4, 2
DATA 1, >F0, 2
DATA 1, >FF, 0

SND567 DATA 4, >99, >B9, >D9, >FF, 1 >3948 - >398C

DATA 6, >80, >0A, >A1, >0A, >C2, >0A, 1
DATA 3, >9A, >BA, >DA, 1
DATA 3, >9A, >BA, >DA, 1
DATA 3, >9B, >BB, >DB, 1
DATA 3, >9B, >BB, >DB, 1
DATA 3, >9C, >BC, >DC, 1
DATA 3, >9C, >BC, >DC, 1
DATA 3, >9D, >BD, >DD, 1
DATA 3, >9D, >BD, >DD, 1
DATA 3, >9E, >BE, >DE, 1
DATA 3, >9E, >BE, >DE, 1
DATA 3, >9F, >BF, >DF, 0

SND123 DATA 4, >98, >B8, >DF, >FF, 1 >398D - >39C6

DATA 4, >80, >03, >A0, >11, 1
DATA 4, >80, >05, >A0, >0F, 1
DATA 4, >80, >07, >A0, >0D, 1
DATA 4, >80, >09, >A0, >0B, 1
DATA 4, >80, >0B, >A0, >09, 1
DATA 4, >80, >0D, >A0, >07, 1
DATA 4, >80, >0F, >A0, >05, 1
DATA 4, >80, >11, >A0, >03, 1
DATA 2, >9F, >BF, 0

SND4 DATA 4, >98, >BF, >DF, >FF, 1 >39C7 - >?????

DATA 2, >80, >07, 1
DATA 2, >80, >06, 1
DATA 2, >80, >05, 1
DATA 2, >80, >04, 1
DATA 2, >80, >05, 1
DATA 2, >80, >06, 1
DATA 2, >80, >05, 1
DATA 2, >80, >04, 1
DATA 2, >80, >03, 1
DATA 2, >80, >02, 1
DATA 2, >80, >01, 1
DATA 1, >9F, 0

SNDOUT DATA 6, >9F, >B4, >DF, >FF, >A0, >04, 10 (>39FC->3A18)
 DATA 1, >B6, 8
 DATA 1, >B8, 7
 DATA 1, >BA, 6
 DATA 1, >BB, 5
 DATA 1, >BD, 4
 DATA 1, >BE, 2
 DATA 1, >BF, 0
 SNDREW DATA 6, >9F, >B4, >DF, >FF, >A0, >20, 10 (>3A19 - >3A35) QPL ALSO
 DATA 1, >B6, 8
 DATA 1, >B8, 7
 DATA 1, >BA, 6
 DATA 1, >BB, 5
 DATA 1, >BD, 4
 DATA 1, >BE, 2
 DATA 1, >BF, 0
 CHIME DATA 10, #>8B01, #>A402, #>C501, >FF, >9C, >BE, >DE, 5 (>3A36 - >3A8A)
 DATA 4, #>A402, >9E, >BC, 7
 DATA 3, #>A704, >BC, 5
 DATA 3, #>A402, >BC, 7
 DATA 8, #>8B01, #>A402, #>C501, >9C, >BE, 5
 DATA 4, #>A402, >9E, >BC, 7
 DATA 3, #>A704, >BC, 5
 DATA 3, #>A402, >BC, 7
 DATA 8, #>8B01, #>A402, #>C501, >9C, >BE, 5
 DATA 4, #>A402, >9E, >BC, 7
 DATA 3, #>A704, >BC, 5
 DATA 3, #>A402, >BC, 7
 DATA 3, >9F, >BF, >DF, 0
 FULSND DATA 6, >BF, >DF, >FF, #>8038, >93, 6 (>3A8B - >????)
 DATA 2, #>8036, 6
 DATA 2, #>8034, 6
 DATA 2, #>8032, 6
 DATA 3, #>8030, >95, 6
 DATA 2, #>802E, 6
 DATA 2, #>802C, 6
 DATA 2, #>802A, 6
 DATA 2, #>8028, 6
 DATA 2, #>8027, 6
 DATA 2, #>8026, 6
 DATA 2, #>8025, 6
 DATA 2, #>8024, 6
 DATA 2, #>8023, 5
 DATA 2, #>8022, 5
 DATA 3, #>8021, >97, 4
 DATA 2, #>8020, 4
 DATA 2, #>801F, 4
 DATA 2, #>801E, 3
 DATA 2, #>801D, 3
 DATA 2, #>801C, 3
 DATA 2, #>801B, 3
 DATA 2, #>801A, 3
 DATA 2, #>8019, 3
 DATA 2, #>8018, 3
 DATA 2, #>8017, 3
 DATA 2, #>8016, 3
 DATA 2, #>8015, 3
 DATA 2, #>8014, 3
 DATA 2, #>8013, 3
 DATA 2, #>8012, 3
 DATA 2, #>8011, 3
 DATA 2, #>8010, 3

Object Loader Program

- 1) This program allows one to load tagged object files into any type of memory on the 99/4a. It is not a linking loader, i.e. all "Ref's" and "Def's" must be resolved before the file is loaded. The prime use of this routine is to load data into the "Command Module Simulator" gram. The Editor/Assembler loader does not allow data to be loaded into the gram.
- 2) The source code for this program is named "LOADERSRC", and it's assembled object code is named "LOADEROBJ". This program makes ref's to subroutines located in "SUBSRC" (object file is "SUBOBJ"), i.e. these two modules make up the entire program. A program image file of the complete program exist under the file name "LOADER". To execute this program under the Editor/Assembler command module, select option 5 ("RUN PROGRAM FILE"). Enter "DSK1.LOADER" for file name. The program will load into memory and start execution. The following screen should be displayed:

Object Loader Rev. 1.3

File Name =

Load Address = >

Memory type (C,G,V) =

- 3) For "File Name", enter the tagged object file name of the file to be loaded. It may be compressed object or uncompressed object.
- 4) For "Load Address", enter the hex address where the program should be loaded. If you have used "AORG" or "RORG", you should enter 0000 for this prompt. I would suggest that you assemble your code without using "ORG" statements. This will allow you to load the data in different memory locations.

Note: The Editor/Assembler command module gram is located starting at gram address >6000. If you want to load data at gram address >6000 you must turn the Editor/Assembler gram OFF. In most cases you will load you data starting at Gram address >8000 and leave Editor/Assembler enabled. The only time it would matter is if you need more than 4 grams worth of storage.

- 5) For "Memory Type", enter G for Gram, C for CPU Ram, or V for VDP Ram.
- 6) Once the file is loaded, the cursor will return to the "File Name" prompt to allow you to load another file.
- 7) To exit this program, hold the "FCTN" key down and press "=" (QUIT). The message "Quit .. Are you sure ? (Y/N)" will be displayed. Enter a Y or N.
- 8) The "Command Module Simulator" (CMS) contains ram or all gram locations (>0000->FFFF), and ram for the command module rom (>6000->7FFF). Two switches on the command module interface connector are used to enable or disable rom and gram. The one on the left controles the rom, and the one on the right controles the gram.

9) Inside the CMS is a dip switch to allow each grom page to be enabled or disabled. The follow list each page:

| switch | gram | normal addr's | simulator addr's | usage |
|---------|--|--------------------|-----------------------|----------|
| 1 | = grom 0 | >0000 - >17FF (6k) | or >0000 - >1FFF (8k) | ----- |
| 2 | = grom 1 | >2000 - >37FF (6k) | or >2000 - >3FFF (8k) | in 99/4a |
| 3 | = grom 2 | >4000 - >57FF (6k) | or >4000 - >5FFF (8k) | ----- |
| 4 | = grom 3 | >6000 - >77FF (6k) | or >6000 - >7FFF (8k) | |
| 5 | = grom 4 | >8000 - >97FF (6k) | or >8000 - >9FFF (8k) | in |
| 6 | = grom 5 | >A000 - >B7FF (6k) | or >A000 - >BFFF (8k) | command |
| 7 | = grom 6 | >C000 - >D7FF (6k) | or >C000 - >DFFF (8k) | module |
| 8 | = grom 7 | >E000 - >F7FF (6k) | or >E000 - >FFFF (8k) | ----- |
| 9 | = grom/rom write protect (closed = read/write, open = read only) | | | |
| 10 - 12 | = not used | | | |

open = page enabled
 closed = page disabled

Note: Dip switch 9 (grom/rom write protect) is also located on the outside of the command module simulator box. This allows grom/rom write protection without having the box open. The normal switch settings inside the box are as follows:

sw1 - sw3 = closed (disabled)
 sw4 - sw9 = open (enabled)

10) To load the grom simulator ram, you must use the special loader mentioned above (the Editor/Assembler command module loader will not load grom). At first you use the Editor/Assembler command module to load the loader program and start execution of the loader program. You now switch the command module "grom-on" switch to "on", the "rom-on" switch to "on" (if you are using the rom), and the "grom/ram write protect" switch to "write enable". Now, using the loader, load your programs/data into grom/rom. If you want to use E/A's linking loader for your rom code, and you want to use ram at >A000 you must "ADRO" the loader program in high memory. Then load your program using E/A's loader. Next load the "Loader" and load your grom code. Or, if you do not need to use grom3 (>6000), then disable grom3 with the page switch inside the simulator. This will allow you to use the Editor/Assembler command module at any time.

11) The example "HEADER" program can may be use as a grom header for your program. Edit the source file "DSK1.HEADER", assemble, and load into grom.

```

0001          IDT 'HEADER'
0003          *
0004          * example grom header
0005          *
0006          * the following header may be located at the start
0007          * of grom3 (>6000), grom4 (>8000), grom5 (>A000),
0008          * grom6 (>C000), or grom7 (>D000).
0009          *
0010          * the first >10 bytes of the header must be at the
0011          * start of a grom boundry, and must follow the
0012          * format shown.
0013          *
0014          * if you have data located at the first of "non-header"
0015          * groms, you must be sure that >AA is not located in the
0016          * first byte.
0017          *
0018 0000    AA          BYTE >AA          id flag
0019 0001    01          BYTE 1           version number
0020 0002    01          BYTE 1           program number
0021 0003    00          BYTE 0           reserved
0022 0004 0000          DATA 0           address of powerup header
0023 0006 0010'        DATA PR0G        address of program header
0024 0008 0000          DATA 0           address of dsr header
0025 000A 0000          DATA 0           address of subroutine header
0026 000C 0000          DATA 0           address of interrupt header
0027 000E 0000          DATA 0           address of basic subprogram header
0028          *
0029          * end of header info
0030          *
0031 0010
0032 0010 0000  PR0G    DATA 0           address of next program header
0033 0012 0026'        DATA START        address of start of this program
0034 0014    11          BYTE NAME1E-$-1  length of text for menu name
0035 0015    54          TEXT 'THE GREATEST GAME'  *** max of 22 characters **
0036          0026' NAME1E EQU $
0037          *
0038          * end of program header
0039          *
0040          000F XML    EQU >0F          gpl "execute machine language" instr
0041          *
0042          * the follow are xml address instructions
0043          *
0044          0070 R6010  EQU >70          address at >6010
0045          00B0 RA000  EQU >B0          address at >A000
0046          00B1 RA002  EQU >2/2+RA000  address at >A002
0047          00B8 RA010  EQU >10/2+RA000  address at >A010
0048          0020 R2000  EQU >20          address at >2000
0049          00C0 RB000  EQU >C0          address at >B000
0050          00D0 RC000  EQU >D0          address at >C000
0051          00E0 RD000  EQU >E0          address at >D000
0052          00F0 RB300  EQU >F0          address at >B300
0053          *
0054 0026    0F START  BYTE XML          fetch address at >6010
0055 0027    B8          BYTE RA010      and start execution at that address.
0056          *
0057          * note:
0058          *
0059          * in this example, the assembly language address of the
0060          * first instruction to be executed would be stored at
0061          * >A010. The xml gpl instruction will read the address

```



```
0062      * from >A010 and the branch and link to that address.
0063      *
0064      * the first instruction will be executed with gpl workspace,
0065      * i.e. you could load your own workspace. Interrupts will
0066      * be disabled.
0067      *
0068      *
0069 0028    28      TEXT '(C)1983 TEXAS INSTRUMENTS INC.'
0070      END
NO ERRORS,      NO WARNINGS
```