



THIS IS AN UNLICENSED COPY OF X-FIGURE.
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X-Figure Version 1.40

X-Figure puzzles are similar to crosswords, except that the clues refer to numbers rather than to words. Just answer the clues and fill in the grid. At the simplest level this requires only straightforward arithmetic. Harder puzzles, however, need some careful deduction to get them started.

The program creates each new puzzle from scratch and will almost certainly never generate the same one twice. There is always a possible solution, although in some cases there may be more than one.

X-Figure is shareware. Please distribute it as widely as possible, using the original *.ZIP* file to keep the component files together. If you use the program regularly then your registration will be greatly appreciated and will encourage the author to fix bugs and to add various improvements - possibly including any suggested by you.

This version of X-Figure had no known bugs at the time of release (November 1994). If you discover any problems or have any useful suggestions then please let us know. Where possible and relevant, please save puzzles that give rise to bug reports.

X-Figure is distributed and supported by SP Services, who can be contacted via electronic mail as **shipps@cix.compulink.co.uk** or on **Compuserve** as **100016,1625**.

The author is **Alan Saul**.

Shareware Registration

For more details, and an order form, please see the document ORDER.WRI that should have accompanied this software (the file is in Windows Write format).

X-Figure is distributed as shareware. If you use it regularly then please register your appreciation and support future development by sending a cheque, payable to SP Services, for £10 to:

SP Services
PO Box 456
Southampton
SO17 1LP
UK

or telephone/fax (credit cards accepted):

Tel: (01703) 550037 (International +44 1703 550037)

Fax: (01703) 322416 (+44 1703 322416)

Credit card instructions may also be sent by electronic mail to:

sphipps@cix.compulink.co.uk or on **Compuserve** to **100016,1625** We accept Visa, Mastercard, American Express and all variants of these. Remember to include the credit card start and expiry dates.

When registering, please state the name that you want to appear in the 'About Box' and other screens. This should be up to 30 characters in length. The number you will be given will only work with these details.

US and Other Non-UK Users

If you register using your credit card then we will debit your account in pounds sterling and the credit card company will do any necessary currency conversion. As a special incentive, there are no extra shipping costs for non-UK orders! If you really cannot avoid paying in a currency other than pounds sterling, please add the equivalent of £6 sterling to the price you send to cover part of our currency exchange costs.

What You Will Get

You will be sent a certificate giving a registration code which will allow you to enter your personal details (specified with your order) into the program. Having done this all references to the fact that you hadn't previously paid for the software will disappear.

You will not normally be sent a disc. If, however, you enclose an additional £5 handling charge, you will be sent the latest version of X-Figure and other shareware programs (please state disc format).

When you receive the certificate, select the menu options *Help*, *About X-Figure* and then click on the *Register* button. Enter the details exactly as they appear on the certificate.

If you upgrade to a later version of X-Figure, simply copy the new files over the existing ones. Your registration details will remain intact.

See also [Disclaimer and Agreement](#)

Disclaimer and Agreement

Users of X-Figure must accept this disclaimer of warranty. If you do not accept this disclaimer, do not use the program.

THE X-FIGURE PROGRAM IS SUPPLIED AS IS. THE AUTHOR DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR ANY PURPOSE. THE AUTHOR ASSUMES NO LIABILITY FOR DAMAGES, DIRECT OR CONSEQUENTIAL, WHICH MAY RESULT FROM THE USE OF X-FIGURE, EVEN IF THE AUTHOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

THE LICENCE AGREEMENT AND WARRANTY SHALL BE CONSTRUED, INTERPRETED AND GOVERNED BY THE LAWS OF ENGLAND AND WALES. YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM ONE STATE TO ANOTHER.

Copyright for this software remains the property of:

Alan Saul
Somerset
United Kingdom

All contact should be made with SP Services in the first instance.

Using the Mouse

Numbers can be entered with the mouse by using the on-screen number pad. If this is not visible then you can make it appear by selecting *Number Pad* from the *View* menu. If the pad obscures your view then you can move it by selecting the bar just above the numbers and dragging it around the screen. To alter the layout between the standard keypad shape and horizontal and vertical rows of buttons, click in this region with the right mouse button.

To enter a number in the grid select the appropriate square (by clicking on it with the left button), and then click on a digit on the number pad.

If a whole clue has been highlighted then the input focus will move to the next digit. However, if the selected square intersects with two clues, X-Figure may not know if you are answering the across clue or the down clue and will not move the focus.

There are a number of ways to indicate whether you want to enter numbers across or down...

- Click on one of the direction buttons



or




- Click on the text of the clue, rather than in the grid.
- Select a square that only belongs to one clue - this will highlight the whole answer. If you now select another square in the same answer, that answer will stay selected.

See also: [Using the Keyboard](#), [Entering Notes](#), [Entering Guesses](#), [Mouse Buttons](#)

Mouse Buttons

In common with normal Windows practice most mouse actions within X-Figure use the left mouse button. Unless otherwise stated, references to 'clicking' mean that the left button should be used.

A few actions, however, are performed by clicking or pointing with the right mouse button...

- Entering notes from the Number Pad.
- Deleting notes or answers using the  button on the Number Pad.
- Resizing the Number Pad, by right clicking in the drag region.
- Hiding clues that are no longer of interest, by clicking on the text of the clue with the right button. (To bring one of these clues back into view, select *Show Hidden Clues* from the *View* menu and right click on it again).

Using the Keyboard

To enter a number in the grid, simply type it in the normal way. Depending on the status of [Notes Using Keypad](#) on the Edit menu, the keys to the side of the main keyboard may have a different effect from those in the top row.

The cursor keys can be used to select a different square.

If a whole clue has been highlighted then the input focus will move to the next digit as you type. However, if the selected square intersects with two clues, X-Figure may not know if you are answering the across clue or the down clue and will not move the focus.

In order to indicate in which direction you want to enter numbers...

- Use Ctrl + one of the direction keys.
 - Select a square that only belongs to one clue. If you then select any square in the same clue, the whole clue will remain selected. This is easier to do than to explain - try it.
- See also: [Using the Mouse](#), [Entering Notes](#), [Entering Guesses](#)

Verifying Your Answers

There are two ways to verify what you have entered...

Automatic Verification

Enable *Verify* on the *View* menu. Now, as you enter numbers in the grid, the text of any relevant clues will be highlighted and have ✓ or

× displayed alongside them. The default highlights are black for undecided , blue for correct , and red for incorrect .

Verify may be turned on or off at any time.

It is important to remember that a blue or ticked clue only indicates that you have satisfied that particular clue (e.g. entered a square number for the clue `A perfect square'), not that you have given the correct answer. The number you have given may yet make the rest of the puzzle impossible to complete!

Reveal

Enable *Reveal* on the *View* menu. This will show the known solution to the puzzle (it is possible for there to be more than one correct solution). Where you have already supplied the correct answer, the grid will be unchanged. Empty squares will have the answer shown.

If you have given an answer which disagrees with the known solution, then the correct number will be shown in red (unless you have changed this to something else) with your answer displayed in the top right corner of the square.

See also: [How Answers are Verified](#), [Change Screen Appearance](#)

An undecided answer is one which has not yet been filled in, or whose clue refers to another which has not yet been answered.

A correct answer is one which matches the clue - whether or not it fits in with solution to the complete puzzle. See [How Answers are Verified](#) for examples of `correct' answers that are actually incorrect.

An incorrect answer is one that fails to match the clue.

Creating a New Puzzle

To create a new puzzle, either select *New Puzzle* from the *File* menu or make a selection from the *Puzzle* menu.

New Puzzle will create another puzzle of the same size and degree of difficulty as the current one. The [Puzzle Menu](#) allows you to alter these settings.

See also: [Seed Codes](#)

Entering Notes

While solving a cryptic puzzle you will probably want to make notes as you work things out. These notes can be entered into squares in place of answers. When you then enter an answer, it will hide any notes.

Letters and punctuation characters can simply be typed in from the keyboard. Numbers can be entered in one of several ways...

- From the keyboard using Ctrl+Number
- From the keyboard using the separate numeric pad. *Notes Using Keypad* on the *Edit* menu will have to be enabled for this to work, and NumLock should be on.
- Using the right mouse button in the Number Pad.

See also: [Entering Guesses](#)

Entering Guesses

If you want to try out a train of thought which may turn out to be incorrect, be wary of simply entering numbers into the grid as it is easy to lose track of which ones need to be removed if the original idea proved wrong. Instead, select Enter Guesses from the *Edit* Menu. Any numbers typed in now will appear in yellow.

Once you have decided whether or not the original guess was correct, select either Upgrade Guesses or Remove Guesses

It isn't a bad idea to have *Enter Guesses* selected all the time and to upgrade the guesses periodically - at times that you are sure that everything entered so far is correct.

Changing the Screen Appearance

The *Appearance* option on the *View* menu displays a dialog allowing most of the screen attributes to be changed. Some of these (such as the background of the clue boxes) are tied to the settings given in the Windows control panel and cannot be altered from within X-Figure.

Select an item in the list box and the button corresponding to its current appearance will be depressed. To change it, click on the desired button.

Rather than have separate foreground and background settings for each item, backgrounds of the grid squares are items in themselves. It is quite possible to make the foreground and background of some things the same, thus rendering them invisible. It is up to you to avoid doing this (unless, of course, you particularly want to make something disappear).

This dialog also allows you to change the shape of the number pad, or to remove it from the screen entirely. Simply depress the appropriate button (the shape of the number pad can also be changed by clicking with the right mouse button in its drag region).

How Answers are Verified

For the purposes of verifying your answers and highlighting clues, your answer is matched against the logic of the clue, **not** the known solution.

For example, consider the clues...

Across

1. A perfect square (2 digits)
2. 1 across times two (2 digits)

Entering any of 01, 04, 09, 16, 25, 36, 49, 64 or 81 will result in 1 across being displayed as correct. In fact 01, 04 and 09 are not allowable, since answers never start with zero, and 64 and 81 are clearly impossible since the answer to 2 across would have three digits.

Whatever you give as your answer to 1 across, even if you enter a non-square (for example 24), then 2 across will be shown as correct so long as you enter twice this value (in this case 48).

Clue and Puzzle Types

Puzzles differ in a number of ways which can be seen by selecting *Custom* from the *Puzzle* menu. In addition to the size of the grid, there are three main groups of clue types...

1. Conversion Factors

These provide an easy starting point to the puzzle since they can always be answered without looking at any other clues.

2. Cross References

These link two or more clues, so that the answer to one is a function of the answer to another.

3. Miscellaneous

These are clues with more than one possible answer. The correct one will have to be determined from looking at other answers that depend on it.

Simple puzzles always have some clues of type (1) to get you started.

Quick puzzles are similar to simple ones, except that the grid is larger and conversion factors of 10 are avoided.

Cryptic puzzles do not have any clues of type (1). Starting will always require a little thought.

Hard puzzles use the toughest settings available.

See also: [Customising Puzzles](#), [Conversion Factors](#), [Seed Codes](#)

Customise Level

Selecting *Custom* from the *Puzzle* menu gives you the opportunity to create puzzles of the type you prefer. Choose from the following...

Clue Types

Check or uncheck the boxes to select the types of clue that may be used.

Provided that you allow X-Figure reasonable scope for generating puzzles then it will abide by your choices. If, however, you do not select enough clue types then some others may have to be used.

For example, if you choose only metric conversion factors then these will be generated along with clues of the type `1 across plus n' and possibly some others. On the other hand, a puzzle consisting entirely of anagrams is quite reasonable and, if you check just the anagrams box, that is what you will get.

Basically, the rules are that in the Conversion Factor and Number Type groups, clearing a check box means that this type of clue will definitely not appear. In the Cross Reference group it only makes it less likely. Checking a particular box is never a guarantee that the clue type will be used in any particular puzzle, only that it may.

Grid Size

X-Figure has a number of pre-defined grid shapes of each size. Select the grid size you prefer.

Times Tables

This setting is in indication of the multiplication tables that are likely to be used for clues such as `1 across times n'. It does not affect the choice of conversion factors. If *Hidden Multiples* is selected then the constant in multiples or divisions may not be given, resulting in clues such as `Multiple of 1 across'.

See also: [Conversion Factors](#)

Conversion Factors

X-Figure knows about the following types of conversion factor...

Metric

These are all multiples of ten, such as *mm* to the *cm*.

Non-Metric

Measures such as inches to the yard. X-Figure knows about certain differences in the UK and the US (e.g. US hundredweight = 100lbs; UK hundredweight = 112 lbs), and uses the international settings in the Control Panel to generate correct questions for the country your PC thinks it's in (at least for UK and US).

Time

'Days in a week' etc.

Miscellaneous

Mostly alternative forms of numbers, such as `dozen', rather than true conversion factors.

Printing Options

Having selected either *Print* or *Print Format* from the *File* Menu, you are asked to select how the printed puzzle should appear. You may choose to print the full puzzle, just the clues, or just the grid. If printing the grid then you can leave it empty, containing any answers that you have entered so far, or showing the full solution.

Where possible, the whole puzzle is fitted onto a single page. If it does not fit then try reducing the grid width or font sizes. If you want the grid and clues on different pages then print the two items separately.

Title

If you specify a title then it will be printed at the top of the first page.

Print

Select how much of the puzzle is to be printed...

Empty Grid and Clues The clues and grid, with nothing filled in.

Filled Grid and Clues The clues and grid, with anything you have entered shown.

Empty Grid Only No clues. Nothing is filled in the grid.

Filled Grid Only No clues. Anything you have entered so far is shown in the grid.

Solution Only No clues. The grid contains the correct answers. Clue numbers are not printed in the grid (this is similar to the way in which newspapers show crossword solutions).

Clues Only Just the clues.

Grid Alignment

The grid may be aligned to the left, right, or centre of the page. If there is space, the clues will be placed alongside the grid.

Grid Width

The width (and height) of the grid.

Fonts

Title Used for the title, if given.

Headers 'Across' and 'Down'.

Clues The actual clues.

Menus

[File Menu](#)

[Edit Menu](#)

[View Menu](#)

[Puzzle Menu](#)

The File Menu

New Puzzle

Retrieve...

Save

Save As...

Print...

Print Format...

Print Setup...

Exit

New Puzzle

Generate a new puzzle from scratch, at the same level as the current one.

Retrieve

Recover a puzzle that was saved earlier

Save

Save the current puzzle, along with any answers or notes that you have entered. If you have not yet saved this puzzle, you will be prompted for a filename.

Save As...

You will be asked to supply the name of a file, in which the current puzzle will be saved along with all answers or notes that you have entered.

Print...

The puzzle will be printed onto paper. The Print Options dialog is displayed, allowing you to select various aspects of the presentation before the printing goes ahead. To see what the printed output will look like use *Print Format...*

Print Format...

This allows you to choose and see how the puzzle will appear on paper, prior to selecting *Print...*

Print Setup...

This allows you to select the printer and printer related settings, such as the paper size and orientation. The *Printer* button on the Print Options dialog provides the same options.

Exit

Exit the X-Figure program. Settings such as window position and appearance will be saved - the current puzzle will not.

The Edit Menu

Enter Guesses

Upgrade Guesses

Remove Guesses

Notes Using Keypad

Enter Guesses

With this menu option enabled, your answers will be shown differently from normal (usually in yellow) to indicate that they are currently guesses. These numbers can later be removed all one go or converted to firm answers.

Upgrade Guesses

Convert all current guesses to firm answers.

Remove Guesses

Delete all guesses from the grid.

Notes Using Keypad

With this enabled, the separate numeric pad on your keyboard can be used to enter notes while the numbers on the top row of the keyboard enter answers. Note that NumLock must be on, otherwise the numeric keypad provides cursor movement.

The View Menu

Verify & Reveal
Show Hidden Clues
Number Pad
Status Bar
Appearance...

Show Hidden Clues

When you are no longer interested in a particular clue, you may right click on the text to hide it. If this menu option is selected, however, hidden clues are displayed, but greyed out. This allows you to retrieve a hidden clue by clicking on it again with the right button.

Status Bar

Use this to toggle the display of the status bar at the bottom of the screen.

Hints

An effective strategy, particularly for cryptic puzzles, is to look at each clue in turn and to enter notes in the grid about anything you can determine. Eventually notes from different clues will combine to yield the contents of a square.

- Make notes about anything you know, however trivial, such as that the last digit of a multiple of two is even.
- Answers never start with zero. This is more a rule than a hint.
- Multiples of five are often good clues to get you started.
- Where one number is a multiple of another, the number of digits in each number provides a useful clue. For example, if 40 times a two digit number gives three digits, then the two digit number is less than 25 (i.e. it starts with 1 or 2), and the product is at least 400.
- If the sum of two numbers or the difference between them is known, and also the last digit of one of the numbers, then the last digit of the other can be determined.
- X-Figure never creates an impossible puzzle. Honest

See also: [Tables of Squares and Cubes](#), [Entering Guesses](#).

Seed Codes

Seed Codes are used to recreate a given puzzle so that any number of people can work on their own copy without having to distribute a file.

For example, a X-Figure puzzle may be printed in a magazine along with a *Seed Code*. Readers with a copy of X-Figure will be able to type in this code in order to recreate and solve the puzzle on-screen. When a puzzle has been created in this manner the reveal function is disabled in order to prevent cheating.

Normally X-Figure injects a high degree of randomness into each puzzle, ensuring that no two are ever likely to be the same. A drawback of seed generated puzzles is that, since the codes are limited in length, there must be a limited number of different puzzles available (a large number - but finite). A compromise is therefore necessary between randomness and the length of the code. Because of this codes are only generated if you specify that you want them.

The *Seed Code* option on the *Puzzle* menu opens a dialog with the following fields:

New Code

Enter a known code, such as one published in a magazine, and then click the *Create* button to recreate the puzzle. Spaces or dashes may be entered as separators and will be ignored. If this field is left blank then a new puzzle will be created - just as though *New Puzzle* had been selected from the *File* menu..

Current Code

This shows the code, if one was generated, for the currently displayed puzzle.

Generate Codes

Check this box if you require a code to be created for each new puzzle generated.

