

## Cars on intersection

### Problem Statement

Two cars A and B are moving with constant velocity 30 km/hr and 45 km/hr respectively, Find the relative velocity of car A with respect to car B, the relative displacement of car A with respect to car B after 30 seconds.

### Input

Velocity of the cars ----- m/s

Acceleration of the car moving in horizontal direction-----  $\text{m/s}^2$

### Control Buttons

"RUN" button starts the animation.

"STOP" button stops the animation.

"RESET" button resets the animation.

### Procedure

Set the initial velocity of the cars and acceleration of the car moving in horizontal direction. Press reset button and then start button to start the animation.

### Concepts used

Basic definitions of velocity and acceleration.  
vector algebra.

### What to see

Relative displacement and velocity of the cars with respect to each other.