

I-50

A car, initially traveling at 20 m/s to the east, accelerates toward the west at 2.0 m/s^2 . At the same time that the car starts, a truck, 60 m west of the car and moving at 16 m/s toward the east, starts to move faster, accelerating at 1.0 m/s^2 . It's a one-lane road and both drivers are too busy fiddling with their CD players to notice each other.

Motion Diagram



Motion Information

| Object: | | Object: | |
|------------|----------|------------|----------|
| Event 1: | Event 2: | Event 1: | Event 2: |
| $t_1 =$ | $t_2 =$ | $t_1 =$ | $t_2 =$ |
| $r_1 =$ | $r_2 =$ | $r_1 =$ | $r_2 =$ |
| $v_1 =$ | $v_2 =$ | $v_1 =$ | $v_2 =$ |
| $a_{12} =$ | | $a_{12} =$ | |

Mathematical Analysis