Mixed Motion Practice

$$v = \frac{d}{t}$$

$$a = \frac{(v_f - v_i)}{t}$$

1. Calculate the acceleration of a car that goes from rest to 50 m/s in 12 seconds.

Knowns/Unknowns | Plug & Chug

Answer w/ Units

2. Calculate the distance that Jose runs if he has a velocity of 8.3 m/s and runs for 45 seconds.

Knowns/Unknowns

Plug & Chug

Answer w/ Units

3. A ball is initially traveling at $15.2 \,\mathrm{m/s}$ and then accelerates at $0.6 \,\mathrm{m/s^2}$ for $4.8 \,\mathrm{s}$. What is the ball's velocity now?

Knowns/Unknowns | Plug & Chug

Answer w/ Units

$$v = \frac{d}{t}$$

$$a = \frac{(v_f - v_i)}{t}$$

4. How much time will it take a boat traveling at 2.7 m/s to travel 120 meters?

Knowns/Unknowns

Plug & Chug

Answer w/ Units

5. What is the final velocity of a roller coaster that starts at rest and accelerates at a rate of $5\,\mathrm{m/s^2}$ for 0.8 s?

Knowns/Unknowns

Plug & Chug

Answer w/ Units

6. What is the velocity of an ATV that travels 13 m in 2 s?

Knowns/Unknowns

Plug & Chug

Answer w/ Units