Warm-Up Notes

MAT 100: Elementary Algebra

Fall 2026

Section 2.6 Solve a Formula for a Specific Variable

Install — 10 minute lesson

Objectives of this Section

- Use the Distance, Rate, and Time formula
- Solve a formula for a specific variable

Skills

Introduced in this section:

- **EQN.V2** — Solving for a variable II (other variables)

Also practiced: WRD.NM (Naming the model).

Lesson

A formula is just an equation with more than one letter in it. To solve a formula for one specific variable, you use the exact same moves you already know for solving an equation for x — you just treat the other letters like they were plain numbers, and get your target letter alone on one side.

I do

Watch. Solve for the time using the distance-rate-time formula. Aurelia is driving from Miami to Orlando at a rate of 65 miles per hour. The distance is 235 miles. To the nearest tenth of an hour, how long will the trip take?

We do

Together. Solve the formula $4x + 3y = 7$ for y.

You do

Your turn. Solve the formula $2x + 3y = 12$ for y (a) when $x = 3$ (b) in general.

Your turn. Solve $a + b = 90$ for a.

Practice

1. Solve the formula $P = 2L + 2W$ for W.

2. Solve for the distance using the distance-rate-time formula. Francie rode her bike for $2\frac{1}{2}$ hours at 12 miles per hour. How far did she ride?

3. Solve the equation $5x - 2y = 10$ for x: (a) when $y = 10$; (b) in general; (c) Which solution is easier for you, (a) or (b)? Why?

4. Solve for the time using the distance-rate-time formula. Aurelia is driving from Miami to Orlando at a rate of 65 miles per hour. The distance is 235 miles. To the nearest tenth of an hour, how long will the trip take?