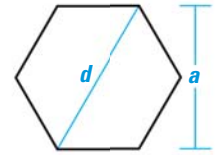
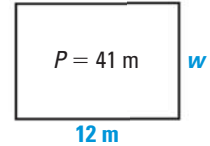


**GUIDED PRACTICE for Example 1**

- Find the radius of a circle with a circumference of 25 feet.
- The formula for the distance d between opposite vertices of a regular hexagon is $d = \frac{2a}{\sqrt{3}}$ where a is the distance between opposite sides. Solve the formula for a . Then find a when $d = 10$ centimeters.

**EXAMPLE 2 Rewrite a formula with three variables**

Solve the formula $P = 2\ell + 2w$ for w . Then find the width of a rectangle with a length of 12 meters and a perimeter of 41 meters.

**Solution**

STEP 1 Solve the formula for w .

$$P = 2\ell + 2w \quad \text{Write perimeter formula.}$$

$$P - 2\ell = 2w \quad \text{Subtract } 2\ell \text{ from each side.}$$

$$\frac{P - 2\ell}{2} = w \quad \text{Divide each side by 2.}$$

STEP 2 Substitute the given values into the rewritten formula.

$$w = \frac{41 - 2(12)}{2} \quad \text{Substitute 41 for } P \text{ and 12 for } \ell.$$

$$w = 8.5 \quad \text{Simplify.}$$

► The width of the rectangle is 8.5 meters.

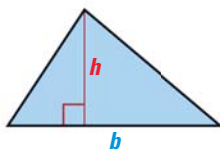
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**GUIDED PRACTICE for Example 2**

- Solve the formula $P = 2\ell + 2w$ for ℓ . Then find the length of a rectangle with a width of 7 inches and a perimeter of 30 inches.
- Solve the formula $A = \ell w$ for w . Then find the width of a rectangle with a length of 16 meters and an area of 40 square meters.

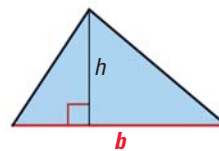
Solve the formula for the variable in red. Then use the given information to find the value of the variable.

5. $A = \frac{1}{2}bh$



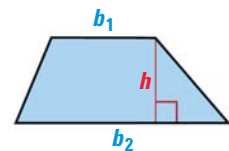
Find h if $b = 12$ m and $A = 84$ m².

6. $A = \frac{1}{2}bh$



Find b if $h = 3$ cm and $A = 9$ cm².

7. $A = \frac{1}{2}(b_1 + b_2)h$



Find h if $b_1 = 6$ in., $b_2 = 8$ in., and $A = 70$ in.²