

EXAMPLE 6**Write and solve an equation**

OLYMPICS In the 2004 Olympics, Shawn Crawford won the 200 meter dash. His winning time was 19.79 seconds. Find his average speed to the nearest tenth of a meter per second.

Solution

Let r represent Crawford's average speed in meters per second. Write a verbal model. Then write and solve an equation.

Distance (meters)	=	Rate (meters/second)	•	Time (seconds)
↓		↓		↓
200	=	r	•	19.79
$\frac{200}{19.79} = \frac{19.79r}{19.79}$				
<div style="display: flex; justify-content: space-between;"> $10.1 \approx r$ Divide each side by 19.79. </div>				
<div style="display: flex; justify-content: space-between;"> Use a calculator. </div>				



► Crawford's average speed was about 10.1 meters per second.

**GUIDED PRACTICE** for Example 6

16. **WHAT IF?** In Example 6, suppose Shawn Crawford ran 100 meters at the same average speed he ran the 200 meters. How long would it take him to run 100 meters? Round your answer to the nearest tenth of a second.

3.1 EXERCISES**HOMEWORK KEY**

- ◆ = **MULTIPLE CHOICE PRACTICE**
Exs. 19, 20, 62, 71, and 81–83
- = **HINTS AND HOMEWORK HELP**
for Exs. 15, 57, and 71 at classzone.com

SKILLS • PROBLEM SOLVING • REASONING

- VOCABULARY** Copy and complete: Two operations that undo each other are called ? .
- NOTETAKING SKILLS** Make an information frame like the one on page 124 for the addition property of equality.

EXAMPLES 1 and 2

on pp. 125–126
for Exs. 3–20

SOLVING ADDITION AND SUBTRACTION EQUATIONS Solve the equation. Check your solution.

- | | | | |
|-----------------|------------------|-------------------|-------------------|
| 3. $x + 5 = 8$ | 4. $m + 9 = 2$ | 5. $11 = f + 6$ | 6. $13 = 7 + z$ |
| 7. $6 = 9 + h$ | 8. $-3 = 5 + a$ | 9. $-7 = 13 + c$ | 10. $-4 = 8 + d$ |
| 11. $y - 4 = 3$ | 12. $t - 5 = 7$ | 13. $1 = h - 10$ | 14. $14 = k - 3$ |
| 15. $6 = w - 7$ | 16. $-2 = n - 6$ | 17. $-11 = b - 9$ | 18. $-21 = j - 8$ |