3.2 EXERCISES

SKILL PRACTICE

1. **VOCABULARY** Copy and complete: To solve the equation $2x + 3x = 20$, you would begin by combining $2x$ and $3x$ because they are __?__.

2. **WRITING** *Describe* the steps you would use to solve the equation $4x + 7 = 15$.

EXAMPLE 1
on p. 141
for Exs. 3–14

SOLVING TWO-STEP EQUATIONS Solve the equation. Check your solution.

3. $3x + 7 = 19$

4. $5h + 4 = 19$

5. $7d - 1 = 13$

6. $2g - 13 = 3$

7. $10 = 7 - m$

8. $11 = 12 - q$

9. $\frac{a}{3} + 4 = 6$

10. $17 = \frac{w}{5} + 13$

11. $\frac{b}{2} - 9 = 11$

12. $-6 = \frac{z}{4} - 3$

(13.) $7 = \frac{5}{6}c - 8$

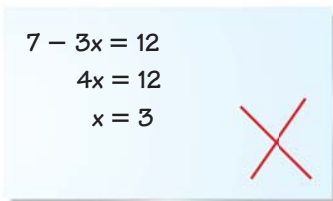14. $10 = \frac{2}{7}n + 4$

EXAMPLE 2
on p. 142
for Exs. 15–23

COMBINING LIKE TERMS Solve the equation. Check your solution.

15. $8y + 3y = 44$

16. $2p + 7p = 54$

17. $11x - 9x = 18$

18. $36 = 9x - 3x$

(19.) $-32 = -5k + 13k$

20. $6 = -7f + 4f$

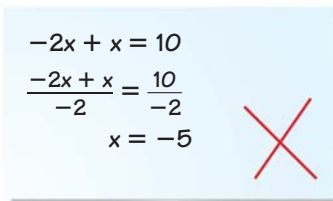21. **TAKS REASONING** What is the first step you can take to solve the equation $6 + \frac{x}{3} = -2$?

Ⓐ Subtract 2 from each side.

Ⓑ Add 6 to each side.

Ⓒ Divide each side by 3.

Ⓓ Subtract 6 from each side.

ERROR ANALYSIS *Describe* and correct the error in solving the equation.

22.
$$7 - 3x = 12$$
$$4x = 12$$
$$x = 3$$
✗

23.
$$-2x + x = 10$$
$$\frac{-2x + x}{-2} = \frac{10}{-2}$$
$$x = -5$$
✗

EXAMPLE 3
on p. 142
for Exs. 24–26

FINDING AN INPUT OF A FUNCTION Write an equation for the function described. Then find the input.

24. The output of a function is 7 more than 3 times the input. Find the input when the output is -8.

25. The output of a function is 4 more than 2 times the input. Find the input when the output is -10.

26. The output of a function is 9 less than 10 times the input. Find the input when the output is 11.