

2.2 EXERCISES

HOMEWORK KEY

 = **WORKED-OUT SOLUTIONS**
on p. WS1 for Exs. 13, 35, and 55

 = **TAKS PRACTICE AND REASONING**
Exs. 50, 56, 57, 58, 60, and 61

SKILL PRACTICE

- VOCABULARY** What number is called the additive identity?
- WRITING** Without actually adding, how can you tell if the sum of two numbers will be zero?

EXAMPLE 1

on p. 74
for Exs. 3–11

USING A NUMBER LINE Use a number line to find the sum.

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|----------------|-----------------|------------------|
| 3. $-11 + 3$ | 4. $-1 + 6$ | 5. $13 + (-7)$ |
| 6. $5 + (-10)$ | 7. $-9 + (-4)$ | 8. $-8 + (-2)$ |
| 9. $-14 + 8$ | 10. $6 + (-12)$ | 11. $-11 + (-9)$ |


EXAMPLE 2

on p. 75
for Exs. 12–25

FINDING SUMS Find the sum.

- | | | |
|--------------------------------------|--|---|
| 12. $-2.4 + 3.9$ | 13. $-8.7 + 4.2$ | 14. $4.3 + (-10.2)$ |
| 15. $9.1 + (-2.5)$ | 16. $-6.5 + (-7.1)$ | 17. $-11.4 + (-3.8)$ |
| 18. $4\frac{1}{5} + (-9\frac{1}{2})$ | 19. $8\frac{2}{3} + (-1\frac{3}{5})$ | 20. $-12\frac{3}{4} + 6\frac{9}{10}$ |
| 21. $-\frac{4}{9} + 1\frac{4}{5}$ | 22. $-3\frac{3}{7} + (-14\frac{3}{4})$ | 23. $-7\frac{1}{12} + (-13\frac{7}{8})$ |

ERROR ANALYSIS Describe and correct the error in finding the sum.

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|--|--|
| 24. $-13 + (-15) = 28$  | 25. $17 + (-31) = -48$  |
|--|--|

EXAMPLE 3

on p. 76
for Exs. 26–31

IDENTIFYING PROPERTIES Identify the property being illustrated.

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|---------------------------------|-----------------------------------|
| 26. $-3 + 3 = 0$ | 27. $(-6 + 1) + 7 = -6 + (1 + 7)$ |
| 28. $9 + (-1) = -1 + 9$ | 29. $-8 + 0 = -8$ |
| 30. $(x + 2) + 3 = x + (2 + 3)$ | 31. $y + (-4) = -4 + y$ |

EXAMPLE 4

on p. 76
for Exs. 32–37

FINDING SUMS Find the sum.

- | | |
|--|---|
| 32. $-13 + 5 + (-7)$ | 33. $-18 + (-12) + (-19)$ |
| 34. $0.47 + (-1.8) + (-3.8)$ | 35. $-2.6 + (-3.4) + 7.6$ |
| 36. $-3\frac{1}{2} + (-7\frac{2}{5}) + (-9\frac{3}{10})$ | 37. $8\frac{2}{3} + (-6\frac{3}{5}) + 3\frac{1}{4}$ |

EVALUATING EXPRESSIONS Evaluate the expression for the given value of x .

- | | |
|---|--|
| 38. $3 + x + (-7); x = 6$ | 39. $x + (-5) + 5; x = -3$ |
| 40. $9.6 + (-x) + 2.3; x = -8.5$ | 41. $-1.7 + (-5.4) + (-x); x = 2.4$ |
| 42. $1\frac{1}{4} + x + (-3\frac{1}{2}); x = -8\frac{2}{5}$ | 43. $ x + (-3\frac{1}{4}) + (7\frac{3}{10}); x = -3\frac{1}{3}$ |