

2.6 EXERCISES

HOMEWORK KEY

 = **WORKED-OUT SOLUTIONS**
on p. WS1 for Exs. 13, 35, and 53

 = **TAKS PRACTICE AND REASONING**
Exs. 23, 49, 55, 56, 57, 59, and 60

SKILL PRACTICE

- VOCABULARY** Copy and complete: The product of a nonzero number and its ? is 1.
- WRITING** How can you tell whether the mean of n numbers is negative without actually dividing the sum of the numbers by n ? *Explain.*

EXAMPLE 1

on p. 103
for Exs. 3–10, 23

FINDING INVERSES Find the multiplicative inverse of the number.


- | | | | |
|-------------------|-------------------|--------------------|---------------------|
| 3. -18 | 4. -9 | 5. -1 | 6. $-\frac{1}{2}$ |
| 7. $-\frac{3}{4}$ | 8. $-\frac{5}{9}$ | 9. $-4\frac{1}{3}$ | 10. $-2\frac{2}{5}$ |

EXAMPLE 2

on p. 104
for Exs. 11–22

FINDING QUOTIENTS Find the quotient.

- | | | | |
|--|---|--|---|
| 11. $-21 \div 3$ | 12. $-18 \div (-6)$ | 13. $-1 \div \left(-\frac{7}{2}\right)$ | 14. $15 \div \left(-\frac{3}{4}\right)$ |
| 15. $13 \div \left(-4\frac{1}{3}\right)$ | 16. $-\frac{2}{3} \div 2$ | 17. $-\frac{1}{2} \div \frac{1}{5}$ | 18. $-\frac{1}{5} \div (-6)$ |
| 19. $-\frac{4}{7} \div (-2)$ | 20. $-1 \div \left(-\frac{6}{5}\right)$ | 21. $8 \div \left(-\frac{4}{11}\right)$ | 22. $-\frac{1}{3} \div \frac{5}{3}$ |

23.  **TAKS REASONING** If $-\frac{5}{7}x = 1$, what is the value of x ?

- (A)** $-1\frac{2}{5}$ **(B)** $\frac{5}{7}$ **(C)** 1 **(D)** $\frac{12}{5}$

EXAMPLE 3

on p. 104
for Exs. 24–32

FINDING MEANS Find the mean of the numbers.

- | | | |
|---------------------|------------------------------|-------------------------------|
| 24. $-10, -8, 3$ | 25. $12, -8, -9$ | 26. $18, -9, 0, -5$ |
| 27. $-2, 9, -3, 5$ | 28. $-1, -4, -5, 10$ | 29. $7, -4, 1, -9, -6$ |
| 30. $-5.3, -2, 1.3$ | 31. $0.25, -4, -0.75, -1, 6$ | 32. $-0.6, 0.18, -2, 5, -0.5$ |

EXAMPLE 4

on p. 105
for Exs. 33–43

SIMPLIFYING EXPRESSIONS Simplify the expression.

- | | | |
|----------------------------|----------------------------|--------------------------------|
| 33. $\frac{6x - 14}{2}$ | 34. $\frac{12y - 8}{-4}$ | 35. $\frac{9z - 6}{-3}$ |
| 36. $\frac{-6p + 15}{6}$ | 37. $\frac{5 - 25q}{10}$ | 38. $\frac{-18 - 21r}{-12}$ |
| 39. $\frac{-24a - 10}{-8}$ | 40. $\frac{-20b + 12}{-5}$ | 41. $\frac{36 - 27c}{9}$ |

ERROR ANALYSIS Describe and correct the error in simplifying the expression.

42.
$$\frac{12 - 18x}{6} = (12 - 18x) \cdot \left(-\frac{1}{6}\right)$$
~~$$= 12\left(-\frac{1}{6}\right) - 18x\left(-\frac{1}{6}\right)$$~~

$$= -2 + 3x$$

43.
$$\frac{-15x - 10}{-5} = (-15x - 10) \cdot \left(-\frac{1}{5}\right)$$
~~$$= -15x\left(-\frac{1}{5}\right) - 10\left(-\frac{1}{5}\right)$$~~

$$= 3x - 2$$