Lesson 84 • Selecting an Appropriate Rational Number

Power Up

– ***Facts***

– ***Mental Math***

– ***Problem Solving***

New Concepts

– ***Examples***

– ***Practice Set***

Written Practice

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Facts Simplify.

$2x + x$ $3x$	$2x - x$ x	$(2x)(x)$ $2x^2$	$\frac{2x}{x} = 2$	$\frac{x^2}{x} = x$
$8xy + 2xy$ $10xy$	$8xy - 2xy$ $6xy$	$(8xy)(2xy)$ $16x^2y^2$	$\frac{8xy}{2xy} = 4$	$\frac{8x^2y}{2y} = 4x^2$
$x + y + x$ $2x + y$	$x + y - x$ y	$(x)(y)(-x)$ $-x^2y$	$\frac{xy}{x} = y$	$\frac{x^2y^3}{x^2y} = y^2$
$4x + x + 2$ $5x + 2$	$4x - x - 2$ $3x - 2$	$(4x)(-x)(-2)$ $8x^2$	$\frac{-4x}{2x} = -2$	$\frac{4x^3}{2x^2} = 2x$

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Written Practice

1. 198

2. 40

3. $20

4. a. 120°

b. about 10.5 cm

5. 36%

6. a. A A A

b. $x = 2; y = 6$

c. 1.5

7. D

8. trinomial, 2nd degree, $x^2 - 2x + 5$

9. 6 yd^2, 54 ft^2

10. $4\sqrt{3}$

11. $3x^2 + 2x$

12. $\frac{4x}{3y^3}$

13. $0.40

14. a. right

b. 12 square units

15. a. $5\sqrt{2}$ units

b. $12\sqrt{2}$ units

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Written Practice

continued

16. a. $1.\overline{3}$

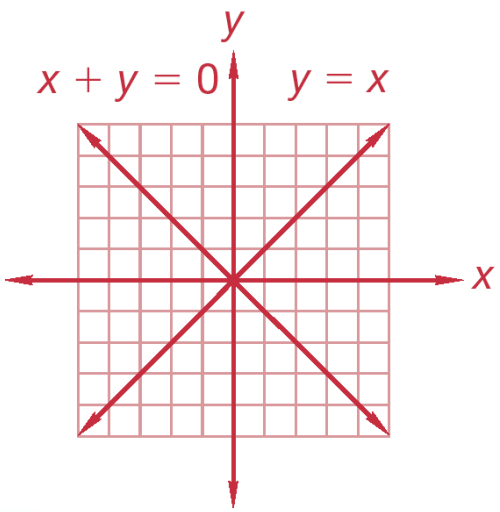
b. $133\frac{1}{3}\%$

17. a. $\frac{5}{2}$

b. 40%

18. 174 in.^{2}

19.



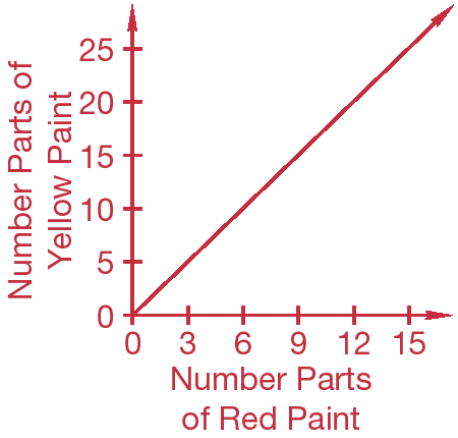
20. 199

21. x = 7

22. x = 6

23. $x = \frac{3}{4}$

24. x = −50



25. Yes, the relationship between the amount of yellow paint and the amount of red paint to produce a gallon of paint is proportional; $Y = \frac{5}{3}x$; $\frac{5}{3}$ is the constant of proportionality

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