

LESSON PRACTICE

2A

Remember that unknowns may not have any value that yields a denominator of zero.

Tell whether the equation is correct or incorrect. If it is incorrect, rewrite the right-hand side correctly.

1.
$$\frac{A^2 + 2A + 3}{A^2 + A + 9} = \frac{A^2}{A^2 + A + 9} + \frac{2A}{A^2 + A + 9} + \frac{3}{A^2 + A + 9}$$

2.
$$\frac{X}{X} + \frac{Y}{X} = \frac{X + Y}{X}$$

3.
$$\frac{X^2 + 3X + 6}{X^2 + 2X + 7} = \frac{X^2}{X^2} + \frac{3X}{2X} + \frac{6}{7}$$

4.
$$\frac{B}{B} + B^0 = 1$$

Simplify by factoring.

5.
$$\frac{4X^2 + X}{X}$$

6.
$$\frac{Y^2 + 2Y}{Y}$$

7.
$$\frac{4X + 4Y}{2}$$

8.
$$\frac{12AB + 16A^2}{4A}$$

9.
$$\frac{5XY + 20XYZ}{5YZ}$$

10.
$$\frac{2X^2Y - XY^2}{XY}$$

LESSON PRACTICE 2A

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Find the common denominator and combine. Add and subtract rational expressions with monomials.

11. $\frac{6}{x+2} + \frac{4x}{x+2} =$

$$\frac{6}{x+2} + \frac{4x}{x+2} = \frac{6+4x}{x+2}$$

12. $\frac{3}{4} + \frac{3}{x} =$

$$\frac{3}{4} + \frac{3}{x} = \frac{3x+12}{4x}$$

13. $\frac{7}{4x} - \frac{3}{4y} =$

$$\frac{7y-3x}{4xy} = \frac{7y-3x}{4xy}$$

14. $\frac{A}{B} - \frac{B}{A} =$

$$\frac{A^2-B^2}{AB} = \frac{A^2-B^2}{AB}$$

15. $\frac{3x}{y-1} + \frac{2x}{y+1} =$

$$\frac{3x(y+1)+2x(y-1)}{y^2-1} = \frac{5xy+x}{y^2-1}$$

16. $\frac{R}{T} + \frac{RS}{RT} =$

$$\frac{R+RS}{RT} = \frac{R(1+S)}{RT} = \frac{1+S}{T}$$

SYSTEMATIC REVIEW

2E

Tell whether the equation is correct or incorrect. If it is incorrect, rewrite the right-hand side correctly.

1. $\frac{x+3}{x} = 1 + \frac{3}{x}$

2. $\frac{2}{x+1} + \frac{3}{x} = \frac{2}{x+1} + \frac{3+1}{x+1}$

Simplify the expression, if possible.

3. $\frac{Ax - 6Y + 6X}{2} =$

4. $\frac{B^4 - B^2}{B^2} =$

5. $\frac{6A^2 + 6A}{12A} =$

Find the common denominator and combine.

6. $\frac{4}{X} + \frac{1}{3} =$

7. $\frac{X}{Y} + \frac{4Y}{X+2} =$

8. $\frac{3}{Q+1} + \frac{2}{Q} =$

Simplify.

9. $2^2 X^3 \cdot 2^3 X^{-1} =$

10. $\frac{Y^3}{Y^3} =$

SYSTEMATIC REVIEW 2E

SYSTEMATIC REVIEW

11. $\left[\left(5^2\right)^4\right]^{-3} =$

12. $(49^3) = (7^2)^3 =$

13. $(x^2)^3(x^{-4})^2 =$

14. $(p^{-4})^{-2}p^3p^{-1} =$

Multiply all the elements of the equation by the least common multiple to simplify, and then solve.

15. $.024F + F = .56$

16. $10\frac{2}{3}B + 3\frac{1}{6} = 1\frac{7}{8}$

Use the distributive property to eliminate the parentheses, and add like terms when possible.

17. $100(2.3X - .07Y) =$

18. $1000(.009A + .02 + 3) =$

Solve.

19. $(6 \div 9) \cdot 2 - 9Y = 8(Y - 4 + 7)$

20. $(11 - 4)^2 \div 7 - |3 - 9| = 14(R - 2R)$