

LESSON PRACTICE

Factor each polynomial and check by multiplying.

1. $x^2 - 6x + 8$

2. $x^2 - 18x + 80$

3. $x^2 - 8x + 15$

4. $x^2 - 9x + 20$

5. $x^2 - 10x + 9$

6. $x^2 - 4x + 3$

7. $x^2 - 16x + 55$

8. $x^2 - 20x + 96$

9. $X^2 - 13X + 42$

10. $X^2 - 11X + 24$

11. $X^2 + 2X - 3$

12. $X^2 + 3X - 18$

13. $X^2 - X - 20$

14. $X^2 + 2X - 15$

15. $5X^2 + 9X - 2$

16. $4X^2 + 7X - 2$

SYSTEMATIC REVIEW

Build a rectangle and find the factors.

1. $x^2 - 3x - 10 = (\quad - \quad)(\quad + \quad)$

2. $x^2 + 3x - 4 = (\quad - \quad)(\quad + \quad)$

Build a rectangle and find the area (product).

3. $(x - 3)(x - 9) =$

4. $(x - 3)(x - 3) =$

5. Find the factors: $x^2 + x - 2$.

6. Check #5 by multiplying the factors to find the product.

7. Find the factors: $x^2 + 3x - 10$.

8. Check #7 by multiplying the factors to find the product.

9. Find the factors: $2x^2 + 7x + 3$.

10. Check #9 by multiplying the factors to find the product.

Simplify each expression.

11. $3^4 \times 3^{-2} \div 3^3 =$

12. $\frac{7^{-10}}{7^5} =$

13. $\frac{A^5 B^2 A^{-4}}{A^3 B^7} =$

Simplify each term, then add like terms.

14. $2AB^{-2} + \frac{4B^{-1}}{B^{-1}A^{-1}} + \frac{3A^2}{B^2A^1} =$

15. $3Y = 2X + 7$ and $Y = -4X$. Solve for both X and Y using substitution.

16. Find three consecutive odd integers such that seven times the second, plus two times the first, minus six times the third, equals negative one.

17. Twelve coins made up of nickels and dimes have a value of \$.95. How many are there of each coin?

18. Solve: two-thirds divided by five-sixths times one-half.

19. Solve for X: $.2X - .02X + 1.4 = 2.09$

20. $5 \frac{1}{2} \%$ of 400 = (*Hint: Change the percent to a decimal before solving.*)

SYSTEMATIC REVIEW

Build a rectangle and find the factors.

1. $x^2 - x - 2 = (\quad - \quad)(\quad + \quad)$

2. $x^2 + 2x - 3 = (\quad - \quad)(\quad + \quad)$

Build a rectangle and find the area (product).

3. $(x - 3)(x + 9) =$

4. $(x - 5)(x + 6) =$

5. Find the factors: $x^2 - 3x - 4$.

6. Check #5 by multiplying the factors to find the product.

7. Find the factors: $x^2 - 2x - 3$.

8. Check #7 by multiplying the factors to find the product.

9. Find the factors: $x^2 - x - 6$.

10. Check #9 by multiplying the factors to find the product.

Simplify each expression.

$$11. (10^2)^7 =$$

$$12. [(5^2)^4]^3 =$$

$$13. \frac{D^{-4}D^3D^{-2}}{D^4D^{-5}} =$$

Simplify each term, then add like terms.

$$14. BB^2 + \frac{3B^{-1}}{B^{-4}} + \frac{5B^4}{B^{-1}} =$$

$$15. Y = -4X + 5 \text{ and } 2Y = 4X - 3. \text{ Solve for } X \text{ and } Y.$$

$$16. \text{ Find three consecutive integers such that four times the second, plus three times the third, minus eight times the first, plus eleven, equals zero.}$$

$$17. \text{ Forty-five coins made up of nickels and dimes have a value of } \$3.30. \text{ How many are there of each coin?}$$

$$18. \text{ Solve: one-half divided by one-half times three-fourths.}$$

$$19. \text{ Solve for } X: 1.03X + .2X - .73X = .45$$

$$20. 5\frac{2}{5}\% \text{ of } 250 =$$

(Hint: Change the percent to a decimal before solving)