

LESSON PRACTICE

Factor completely.

1. $x^4 - 9x^2 =$

2. $3x^3 - 75x =$

3. $4x^4 - 4x^2 =$

4. $5x^5 - 5x =$

5. $-2x^2 - 16x - 30 =$

6. $3x^3 + 9x^2 - 30x =$

7. $5x^3 - 5x^2 - 30x =$

8. $x^3 + 11x^2 + 30x =$

9. $-4X^2 - 28X - 40 =$

10. $-3X^3 - 24X^2 - 36X =$

11. $2X^3 - 8X^2 - 10X =$

12. $5X^5 - X^4 - 6X^3 =$

13. $-3X^3 - 12X^2 + 36X =$

14. $X^4 + 3X^3 - 4X^2 =$

15. $4X^3 - 36X =$

16. $2X^4 - 32X^2 =$

SYSTEMATIC REVIEW

Find the factors.

1. $X^4 - 16$

2. Check #1 by substituting 10 for X.

3. $16X^2 - 9$

4. Check #3 by substituting 10 for X.

Find the missing factor.

5. $X + 2 \sqrt{3X^2 - 2X - 9}$

6. Check #5 by multiplication.

Build and find the product.

7. $(X - 3)(X - 4) =$

8. Check #7 by multiplying the binomials vertically.

Solve using oriental squares.

9. $75^2 =$

10.
$$\begin{array}{r} 41 \\ \times 49 \\ \hline \end{array}$$

11. Find the factors and check: $2X^2 + 4X + 2$.

12. Find the factors and check: $6X^2 - 600$.

Solve for the unknown.

13. $\frac{3}{7} = \frac{6}{Q} = (Q \neq 0)$

14. $\frac{2}{9} = \frac{X}{36}$

15. $.015 = .25Q - .44$

16. $-4X - 16 = -5X + 43$

17. Express 49,703 with exponential notation.

18. Write as a decimal number: $1 \times 10^{-2} + 5 \times 10^{-4}$

19. Find three consecutive integers such that 12 times the second, plus 4 times the first, equals 9 times the third, plus 8.

20. $(2X + 3)(A + 4) = (2X)(\quad + \quad) + (3)(\quad + \quad) = (\quad + \quad) + (\quad + \quad)$

SYSTEMATIC REVIEW

Find the factors.

1. $x^3 - 9x$

2. Check #1 by substituting 10 for x .

3. $x^4 - 81$

4. Check #3 by substituting 10 for x .

Find the missing factor.

5. $x - 3 \overline{) 2x^2 - 7x - 8}$

6. Check #5 by multiplication.

Build and find the product.

7. $(x - 2)(x - 1) =$

8. Check #7 by multiplying the binomials vertically.

Solve using oriental squares.

9. $95^2 =$

10.
$$\begin{array}{r} 24 \\ \times 26 \\ \hline \end{array}$$

11. Find the factors and check: $5X^2 - 45$.

12. Find the factors and check: $4X^2 - 324$

Solve for the unknown.

13. $\frac{4}{11} = \frac{P}{110}$

14. $\frac{5}{8} = \frac{C}{15}$

15. $-50BY + 30B = 80BY - 40B$ ($B \neq 0$) 16. $2.07 - .9X = 5X + .83$

17. Justin has fourteen coins consisting of quarters and dimes.
If the total value is \$2.30, how many of each kind does he have?

18. If a race car driver travels at 180 mph for 4.2 hours, what is his distance?

19. If the driver in #18 decreases his rate by 30 mph, how long would it take to travel the same distance?

20. $(\quad + \quad)(\quad + \quad) = (\quad)(\quad + \quad) + (\quad)(\quad + \quad) = (XC + XB) + (AC + AB)$