

## LESSON PRACTICE

Build.

1.  $x^2 - 3x - 7$

2.  $2x^2 - 7x - 3$

3.  $x^2 + 5x + 9$

Build and add.

4. 
$$\begin{array}{r} x^2 + 3x + 2 \\ + x^2 + 7x + 12 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} x^2 + 6x + 5 \\ + 3x^2 - x - 2 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 5x^2 - 5x - 10 \\ + 2x^2 + 11x + 5 \\ \hline \end{array}$$

Build a rectangle and find the area (product).

7.  $(x + 4)(x + 5) =$

8.  $(x + 7)(x + 3) =$

9.  $(x + 4)(x + 8) =$

Multiply.

$$\begin{array}{r} 10. \quad 7x + 1 \\ \times \quad x + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 3x + 7 \\ \times \quad x + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 2x + 8 \\ \times \quad 3x + 1 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad x + 8 \\ \times \quad x - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 2x - 1 \\ \times \quad x + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 3x + 5 \\ \times \quad x + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad 4x - 2 \\ \times \quad x - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 17. \quad 5x + 2 \\ \times \quad 3x - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 18. \quad 3x + 7 \\ \times \quad 4x + 2 \\ \hline \end{array}$$

## SYSTEMATIC REVIEW

Build and add.

$$\begin{array}{r} 1. \quad 3x^2 + 7x + 6 \\ + \quad x^2 + 2x + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 2x^2 + 5x + 1 \\ + \quad x^2 + 3x + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 4x^2 + 8x + 2 \\ + \quad -x^2 + 3x - 1 \\ \hline \end{array}$$

Build a rectangle and find the area (product).

$$4. \quad (x + 4)(x + 8) =$$

$$5. \quad (x + 5)(x + 2) =$$

$$6. \quad (x + 2)(x + 6) =$$

Multiply.

$$\begin{array}{r} 7. \quad 3x + 6 \\ \times \quad x + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 2x + 5 \\ \times \quad x + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 4x - 5 \\ \times \quad x + 1 \\ \hline \end{array}$$

$$10. \text{ Write on one line: } \frac{1}{x^{-4}}$$

$$11. \text{ Rewrite using positive exponents: } x^{-3}$$

Simplify. Write expressions with exponents on one line.

$$12. \quad 5^2 \times 3^0 \times 5^{-4} =$$

$$13. \quad A^4 \div A^7 =$$

$$14. \quad (5^2)^5 =$$

$$15. \quad (5)^{12} = (5^3)^? =$$

16.  $\sqrt{196} =$

17.  $C^{-5} \times C^2 =$

18. The base of a rectangle is  $X + 4$ , and the height is  $X + 5$ . What is the area of the rectangle? (Remember that the area of a rectangle is base times the height.)

19. Find the area of the rectangle in #18 if  $X$  equals six.

20. Take two times the base and height of the rectangle in #18, using the distributive property, and then find the polynomial that expresses the new area.

## SYSTEMATIC REVIEW

Build and add.

$$\begin{array}{r} 1. \quad x^2 - 3x - 7 \\ + 2x^2 + 4x - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad x^2 + 11x + 2 \\ + 3x^2 - 4x + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad x^2 - 10x - 5 \\ + -2x^2 - x + 14 \\ \hline \end{array}$$

Build a rectangle and find the area (product).

4.  $(x + 2)(x + 7) =$

5.  $(2x + 3)(x + 4) =$

6.  $(x + 1)(x + 9) =$

Multiply.

$$\begin{array}{r} 7. \quad \begin{array}{r} 2x + 4 \\ \times \quad x + 3 \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} 8. \quad \begin{array}{r} 3x - 1 \\ \times \quad x + 4 \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} 9. \quad \begin{array}{r} 2x - 3 \\ \times \quad x - 4 \\ \hline \end{array} \end{array}$$

10. Write on one line:  $\frac{1}{x^4}$

11. Rewrite using positive exponents:  $\frac{1}{y^{-5}}$

Simplify. Write expressions with exponents on one line.

12.  $3^7 \times 4^3 \times 4^{-2} =$

13.  $B^5 \div B^1 =$

14.  $(8^3)^6 =$

15.  $(2)^{15} = (2^3)^? =$

16.  $\sqrt{225} =$

17.  $D^{-3} \times D^8 \times D^{-7} =$

18. The base of a rectangle is  $2X + 4$ , and the height is  $X + 4$ .  
What is the area of the rectangle?

19. Find the area of the rectangle in #18 if X equals 10.

20. The area of a second rectangle is  $X^2 + 3X + 1$ . What is the sum of the area of the two rectangles (from #18 and #20)?