

Algebra 1
Ch. 8 review

Test Ch. 8 is Friday

8-1 Adding and Subtracting Polynomials

Write each polynomial in standard form.

11. $x + 2 + 3x^2$

12. $1 - x^4$

$3x^2 + x + 2$ $-x^4 + 1$

Find each sum or difference.

15. $(x^3 + 2)$ + $(-3x^3 - 5)$

$$\underline{1x^3} + \underline{-3x^3}$$

$$-2x^3 + -3$$

$$16. a^2 + 5a - 3 + (2a^2 - 4a + 3)$$

$$\underline{1a^2 + 5a + 3} \quad \underline{-2a^2 + 4a + 3}$$

$$-1a^2$$

$$-a^2 + 9a + -6$$

$$(a + 3) + (2a - 5)$$

$$\begin{array}{r} a + 3 \\ 2a - 5 \\ \hline \end{array} \quad (a + 3)(2a - 5)$$

8-2 Multiplying a Polynomial by a Monomial

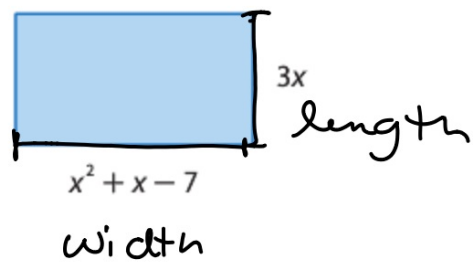
Solve each equation.

19. $x^2(x+2) = x(x^2+2x+1)$

$$\begin{array}{ccccccc} \textcircled{x^3} & + & \textcircled{2x^2} & - & \textcircled{x^3} & + & \textcircled{2x^2} & + & x \\ -x^3 & - & 2x^2 & - & x^3 & - & 2x^2 & & \end{array}$$
$$0 = x$$

$$x =$$

22. **GEOMETRY** Find the area of the rectangle.



$$A = l \cdot w$$

$$= 3x(x^2 + x - 7)$$

$$= 3x^3 + 3x^2 - 21x$$

~~$x^2 - 21$~~
8-3 Multiplying Polynomials

Find each product.

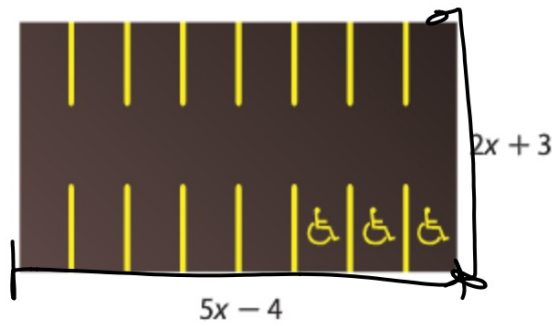
23. $(x - 3)(x + 7)$

24. $(3a - 2)(6a + 5)$

$$\begin{array}{r} x - 3 \\ x + 7 \\ \hline x^2 + 7x - 3x - 21 \\ \hline x^2 + 4x - 21 \end{array}$$

27. **PARKING LOT**

The parking lot shown is to be paved. What is the area to be paved?



$$(5x - 4)(2x + 3)$$

31. $(2x - 3)(2x + 3)$

$$32. \quad \cancel{4r^2 + 25t^2}$$

$$(2r + 5t)$$

$$\underline{2r + 5t}$$

$$10rt + 25t^2$$

$$\underline{4r^2 \quad 10rt}$$

$$4r^2 + 20rt \quad 25t^2$$

$$X^2 + 6X + 8$$

$$\begin{array}{c} 8 \\ 2 \quad 4 \\ \hline 6 \end{array}$$

$$(X+2)(X+4)$$

$$X^2 - 10X + 24 = 0$$

$$\begin{array}{c} 24 \\ -6 \quad -4 \\ \hline -10 \end{array}$$

$$(X-6)(X-4) = 0$$

↓

$$X-6=0$$
$$+6 \quad +6$$

↓

$$X-4=0$$
$$+4 \quad +4$$

$$X=6$$

$$X=4$$

$$\begin{array}{c}
 x^2 - 81 \\
 \downarrow \quad \downarrow \\
 (x + 9)(x - 9)
 \end{array}$$

$$\begin{array}{c}
 16a^2 - 25b^2 \\
 (4a - 5b)(4a + 5b)
 \end{array}$$

$$\begin{array}{c}
 x^4 - y^4 \\
 (x^2 + y^2)(x^2 - y^2) \\
 (x^2 + y^2)(x + y)(x - y)
 \end{array}$$