

Algebra 1  
Review Ch. 8.1-8.4

MCT Wed. 8.1-8.4

## 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.  $(x^3 + 2) + (-3x^3 - 5)$   $(x^3 + 2) + -1(-3x^3 - 5)$

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

$$4x^3 + 7$$

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

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

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

## 8-2 Multiplying a Polynomial by a Monomial

Solve each equation.

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

$$\begin{aligned} & x^2 \cdot x \quad x^2 \cdot 2 \quad x \cdot x^2 \quad x \cdot 2x \quad x \cdot 1 \\ & \cancel{x^3} + 2\cancel{x^2} = \cancel{x^3} + 2\cancel{x^2} + x \end{aligned}$$

$$\begin{aligned} & 0 = x \\ & x = 0 \end{aligned}$$

Solve + check

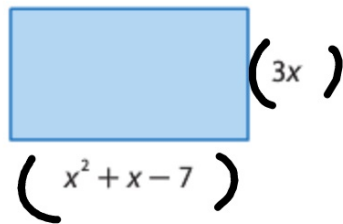
21.  $2(4w + w^2) - 6 = 2w(w - 4) + 10$

$$\begin{array}{r} 8w + 2w^2 - 6 = 2w^2 - 8w + 10 \\ + 8w - 2w^2 + 6 \quad - 2w^2 + 8w + 6 \\ \hline \end{array}$$

$$\frac{16w}{16} = \frac{16}{16}$$

$$w = 1$$

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



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

$$3x \cdot xx + 3xx + 3x \cdot -7$$

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

## 8-3 Multiplying Polynomials

Find each product.

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

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

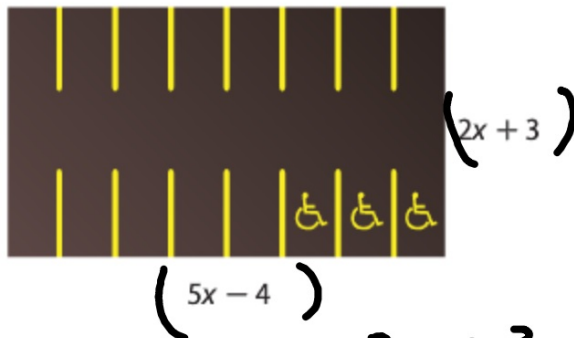
24.  $(3a - 2)(6a + 5)$

$$\begin{array}{r} 3a - 2 \\ 6a + 5 \\ \hline 18a^2 + 15a - 10 \\ -12a \\ \hline 18a^2 + 3a - 10 \end{array}$$



27. **PARKING LOT**

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



$$\begin{array}{r}
 5x - 4 \\
 \underline{2x + 3} \\
 10x^2 - 8x \\
 \underline{15x - 12} \\
 10x^2 + 7x - 12
 \end{array}$$

$$\begin{array}{r}
 2x + 3 \\
 \underline{5x - 4} \\
 -8x - 12 \\
 \underline{10x^2 + 15x} \\
 10x^2 + 7x - 12
 \end{array}$$

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

$$\begin{array}{r} 2x - 3 \\ 2x + 3 \\ \hline 4x^2 - 6x + 6x - 9 \\ \hline 4x^2 - 9 \end{array}$$

32.  $(2r + 5t)^2$

$$\begin{array}{r} 2r + 5t \\ 2r + 5t \\ \hline 10rt + 25t^2 \\ 4r^2 + 10rt \\ \hline 4r^2 + 20rt + 25t^2 \end{array}$$

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

$$\begin{array}{c} \uparrow \\ x^2 - 2x - 15 \end{array}$$

