

Algebra 1
Review Ch. 8.1-8.4
Quiz Tues 8.3-8.4
MCT Wed.

Whiteboards?

8-1 Adding and Subtracting Polynomials

Write each polynomial in standard form.

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

12. $1 - x^4 + 2$

$3x^2 + x + 2$

$-x^4 + 3$

Find each sum or difference.

15. $(\underline{1}x^3 + \underline{2}) + (-\underline{3}x^3 - \underline{5})$

$-2x^3 + -3$

$$16. \ a^2 + 5a - 3 \overline{) \mid} (2a^2 - 4a + 3)$$

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

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

8-2 Multiplying a Polynomial by a Monomial

Solve each equation.

$$0(z) = 0(0+0+1)$$
$$0 = 0$$

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

$$x^2 \cdot x + x^2 \cdot 2 = x \cdot x^2 + x \cdot 2x + x \cdot 1$$

$$\cancel{x^3} + 2\cancel{x^2} = \cancel{x^3} + 2\cancel{x^2} + x$$
$$-x^3 - 2x^2 - x^3 - 2x^2$$

$$0 = x$$

$$x = 0$$

$$2(4w+1) - 4 = 4 \quad 2(-3) + 10$$

~~$10 + -6 =$~~

~~$2w + w^2$~~ $2w \cdot w$ ~~$2w \cdot -4$~~

$$8w + 2w^2 + -6 = 2w^2 - 8w + 10$$

$$+ 8w - 2w^2 + 6$$

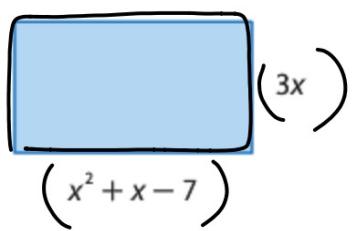
$$\frac{16w}{16} = \frac{16}{16}$$

$$w = 1$$

$$\frac{w - 2 = 0}{+2 \quad +2}$$

$$w = 2$$

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



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

$$3 \times x^2 \quad 3 \times x \quad 3 \times -7$$

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

8-3 Multiplying Polynomials

Find each product.

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

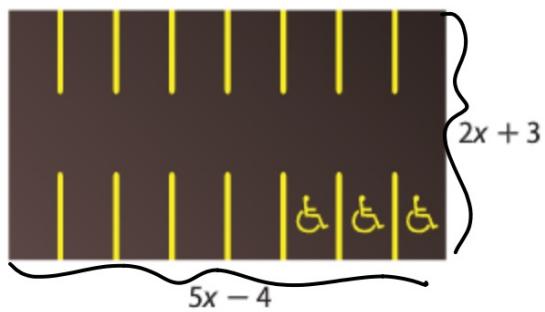
$$\begin{array}{r} x - 3 \\ \times +7 \\ \hline x^2 \quad 7x \quad -21 \\ -3x \\ \hline x^2 + 4x - 21 \end{array}$$

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

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

27. PARKING LOT

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



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

$$31. (2x - 3)(2x + 3) \quad 4x^2 - 9$$

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

The diagram shows the multiplication of two binomials, $(2x - 3)$ and $(2x + 3)$, resulting in the difference of squares $4x^2 - 9$. The terms $2x$ and -3 are aligned vertically under the first binomial, and $2x$ and $+3$ are aligned vertically under the second binomial. The middle row shows the partial products $4x^2$ and -9 . The term $6x$ in the middle row is circled with a red circle.

$$32. (2r+5t)^2 \quad 4r^2 + 20rt + 25t^2$$

$$2r + 5t$$

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

$$\underline{10tr + 25t^2}$$

$$\underline{10tr}$$

$$\underline{4r^2 + 20rt + 25t^2}$$

$$\frac{3}{x^2}$$

$$\frac{3}{n}$$

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$$\frac{1}{3}x^2$$

$$\frac{3x}{5x} \quad \frac{3}{5}$$