Algebra 1
Ch. 8 review
Quiz 8.8-8.9 today
Test Ch. 8 is Friday
Triangle puzzles?

8-5 Using the Distributive Property

Use the Distributive Property to factor each polynomial.

35. $12x + 24y$

$\frac{12x}{12} \quad \frac{24y}{12}$

$12(x + 2y)$

37. $8xy - 16x^3y + 10y$

$2y \quad 2y \quad 2y$

$2y(4x - 8x^3 + 5)$

40 $(24am - 9an) + (40bm - 15bn)$

$3a \quad 3a \quad 5b \quad 5b$

$3a(8m - 3n) \quad 5b(8m - 3n)$

$(8m - 3n)(3a + 5b)$

Solve each equation. Check your solutions.

41. $x(3x - 6) = 0$

$x = 0$ or $3x - 6 = 0$

$+6 \quad +6$

$3x = 6$

$x = 2$

42. $6x^2 = 12x$

$-12x \quad -12x$

$6x^2 - 12x = 0$

$\frac{6x^2}{6x} - \frac{12x}{6x} = 0$

$6x(x - 2) = 0$

$6x = 0$ or $x - 2 = 0$

$\frac{6x}{6} = \frac{0}{6}$ $\quad +2 \quad +2$

$x = 0$ $\quad x = 2$

43. $x^2 = 3x$

Example 9

Factor $x^2 + 10x + 21$

$(x+3)(x+7)$

Solve each equation. Check your solutions.

50. $x^2 + 5x - 50 = 0$

Example 10

Factor $12a^2 + 17a + 6$

$12a^2+8a+9a+6$

72

1 72
2 36
3 24
4 18
6 12
8 9

Example 11

Solve $x^2 - 4 = 12$ by factoring.

$= 0$

Example 12

Solve $(x-9)^2 = 144$.

$\pm$

$\sqrt{(x-9)^2} = \sqrt{144}$

$x - 9 = \pm 12$

$x - 9 = 12$ $\quad$ $x - 9 = -12$

$+9 \quad +9$ $\quad$ $+9 \quad +9$

$x = 21$ $\quad$ $x = -3$

8-1 Adding and Subtracting Polynomials

Write each polynomial in standard form.

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

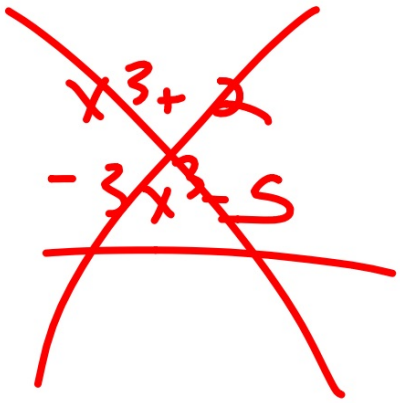
12. $1 - x^4$

$3x^2 + x + 2$

Find each sum or difference.

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

$-2x^3 - 3$



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

$a^2+5a-3-2a^2+4a-3$

$-a^2+9a-6$

8-2 Multiplying a Polynomial by a Monomial

Solve each equation.

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

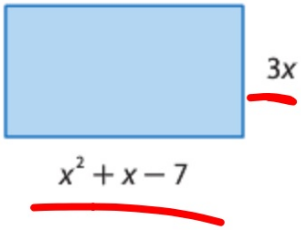
$x^3 + 2x^2 = x^3 + 2x^2 + x$

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

$0 = x$

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

22. GEOMETRY Find the area of the rectangle.



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

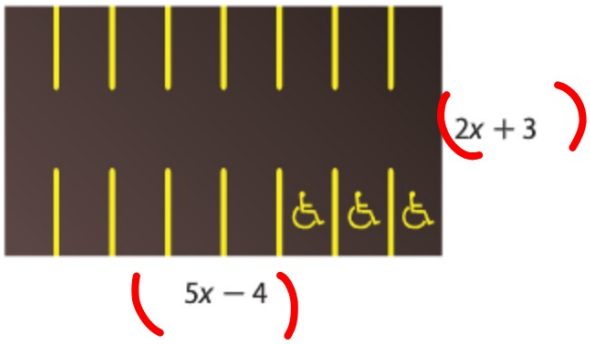
8-3 Multiplying Polynomials

Find each product.

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

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

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



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

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

$(2r+5t)(2r+5t)$

$64x^2 + 16x + 1$

$(8x + 1)^2$

$x^4 - 1$

$\rightarrow (x^2 + 1)(x^2 - 1)$

$(x^2 + 1)(x + 1)(x - 1)$