Module 4 Review

Factoring, Completing the Square, & Quadratic Formula

Solve By Factoring

$$1) \quad 14x^3 = 32x^2 - 8x$$

1.4 seconds

Solve By Completing The Square

$$2)\ 4x^2 - 20x = 5$$

$$x = \frac{3}{4}\ mult\ of\ 2$$

Solve By Quadratic Formula

$$3)\ f(x) = 8x^2 - 16x - 40$$

$$40x^2 + 11x - 2 = 0$$

Solve By Factoring

4) $6x^2 - 600 = 0$

$$x = \frac{5 \pm \sqrt{30}}{2}$$

Solve By Completing the Square

5) $-8x^2 - 8x - 56 = 0$

$$x = 1 \pm \sqrt{6}$$

Solve By Quadratic Formula

$$6) \quad 24x - 9 = 16x^2$$

$$x = \frac{-5}{2} \text{ & } \frac{3}{2}$$

Write an equation given the following roots:

7)

$$x = 0 \; mult \; of \; 2 \; \& \; 5 \; mult \; of \; 2$$

$$x = 1 \; mult. \, of \; 2, -1 \; mult. \, of \; 2$$

Write an equation given the following roots:

$$8) \quad x = \frac{-2}{5} \quad \& \quad \frac{1}{8}$$

$$x = \frac{-3 \pm \sqrt{13}}{2}$$

Solve the following:

9) A baseball player wants to see how fast he can throw a ball to his friend. The height (h) of the ball in feet is modeled by the function h(t) = -16t² + 19t + 5 where t is the time in seconds the ball is in the air. Determine how long this baseball lasted in the air until it reaches his friends glove. (Assume his friend is at a height of 0.)

$$x^4 - 10x^3 + 25x^2 = 0$$

Solve Using the Method of Your Choice:

10) $4x^2 + 4x - 15 = 0$

$$x = 0, \frac{2}{7}, 2$$

Solve Using the Method of Your Choice:

11) $5x^4 - 10x^2 + 5 = 0$

$$x = \frac{-1 \pm 3i\sqrt{3}}{2}$$

Solve Using the Method of Your Choice:

$$12) \ 2x^2 + 6x - 2 = 0$$

$3 \, ft \, x \, 9 \, ft$

13) The length of a rectangular garden is 6 more than the width. The area of the garden is 27 feet squared. Find the dimensions of the garden.

$$x = \pm 10$$