

Warm Up Mon wk 15

Write a polynomial function in standard form with the given zeroes.

1. $x = 0, -3, 4$

$$f(x) = x(x+3)(x-4)$$

$$f(x) = x^3 - x^2 - 12x$$

2. $-3, -1$ (multiplicity 2)

$$f(x) = (x+3)(x+1)^2$$

$$f(x) = x^3 + 5x^2 + 7x + 3$$

In 5 and 6, find all solutions.

5. $4x^3 = 9x$

$$4x^3 - 9x = 0$$

$$x(4x^2 - 9) = 0$$

$$x(2x+3)(2x-3) = 0$$

$$x = 0 \text{ or } 2x + 3 = 0 \text{ or } 2x - 3 = 0$$

$$x = \{0, -3/2, 3/2\}$$

Quiz 5.1-5.3 FRIDAY (looks like this WU)

Put in standard form, then classify by degree and by number of terms.

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

$$2x^5 - 5x^4 - 3x^3$$

By degree: Quintic

By # of terms: Trinomial

Use factoring to find the zeroes of the function.

4. $f(x) = x^3 - x^2 - 5x + 5$

$$x = \{1, \sqrt{5}, -\sqrt{5}\}$$

6. $3x^4 + 2x^2 = 5$

$$x = \left\{1, -1, \frac{i\sqrt{15}}{3}, \frac{-i\sqrt{15}}{3}\right\}$$