

Unit 3 Class-work #2 Review 3.1-3.3

Simplify each expression and then CLASSIFY it based on it's degree and number of terms.

$$1) (14m^2 - 7m + 8m^4 + 12m^3) - (3m^4 - 15m^2 + 20m + m^3) + (12m^2 - 16m - 6m^4 + m^3)$$

$$2) 10v(4v^2 - 6v - 6)$$

$$3) (5v - 3)(12v + 4)$$

$$4) (2x - 5)^2$$

$$5) (12n - 6)(8n^2 - 12n + 1)$$

Divide using the appropriate method.

$$6) (20m^4 + 4m^3 + 5m^2) \div 10m^2$$

$$7) (b^3 - 14b^2 + 27b + 18) \div (b - 3)$$

$$8) (6k^5 + 74k^4 - 140k^3 - 12k - 159) \div (k + 14)$$

$$9) (8a^3 + 56a^2 + 24a - 88) \div (8a - 8)$$

$$10) (7n^4 - 5n^3 + 49n^2 - 23) \div (7n - 5)$$

Find all REAL Zeros. Then write the zeros as factors and then rewrite the function in FACTORED FORM.

$$11) f(x) = 2x^2 - 5x + 2$$

$$12) f(x) = 5x^3 + 11x^2 + 7x + 1$$

Write a polynomial function of least degree with integral coefficients that has the given zeros.

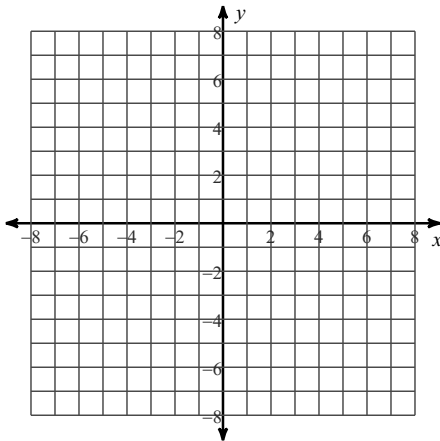
13) $-5, -4, 4$

14) 1 mult. $2, \frac{4}{5}$

For each Polynomial Function:

- 1) State the degree of the polynomial
- 2) State the maximum number of turns the graph of each function could make
- 3) State the number of real zeros and approximate each zero to the nearest tenth
- 4) Approximate the relative minima and relative maxima to the nearest tenth
- 5) State the end behavior.

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



16) $f(x) = x^4 - 4x^2 - 2x + 1$

