

Algebra 2
Ch. 5 MCT Review

Quiz 5.3-5.4 today
MCT 5.1-5.4 is Tues.

5-3 Polynomial Functions

State the degree and leading coefficient of each polynomial in one variable. If it is not a polynomial in one variable, explain why.

22. $5x^6 - 3x^4 + x^3 - 9x^2 + 1$

Find $p(-2)$ and $p(x+h)$ for each function.

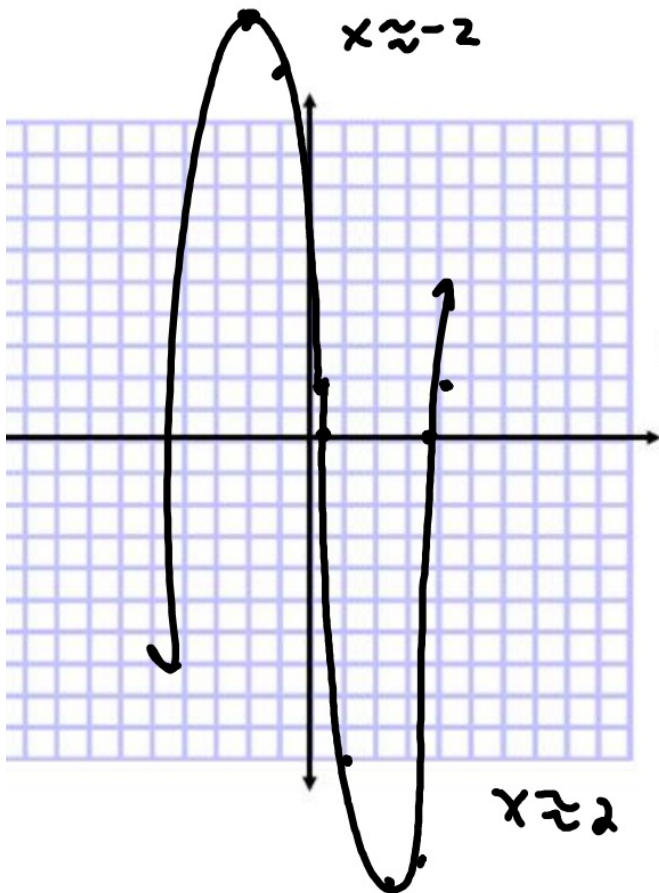
25. $p(x) = x^2 + 2x - 3$

$$(x+h)^2 + 2(x+h) - 3$$
$$x^2 + 2hx + h^2 + 2x + 2h - 3$$

5-4 Analyzing Graphs of Polynomial Functions

Complete each of the following.

- Graph each function by making a table of values.
- Determine the consecutive integer values of x between which each real zero is located.



Use graphing calc (if you want)
Will not be coming around fixing things
for you...ask now if you have questions.

$$y \rightarrow \infty \text{ if } x \rightarrow \infty$$
$$y \rightarrow -\infty \text{ if } x \rightarrow -\infty$$

5-1 Operations with Polynomials

Simplify. Assume that no variable equals 0.

11. $\frac{14x^4y}{2x^3y^5}$

$$7x^1y^{-4}$$

$$\frac{7x}{y^4}$$

$$(m + p)(m^2 - 2mp + p^2)$$

5-2 Dividing Polynomials

Simplify.

17. $\frac{12x^4y^5 + 8x^3y^7 - 16x^2y^6}{(4xy^5)}$

$$\frac{12x^4y^5}{4xy^5} + \frac{8x^3y^7}{4xy^5} - \frac{16x^2y^6}{4xy^5}$$

$$3x^3y^0 + 2x^2y^2 - 4x^1y^1$$

$$3 \cdot 1x^3$$

19. $(a^4 + 5a^3 + 2a^2 - 6a + 4)(\underline{a+2})^{-1}$

synthetic division or old school...

$$\begin{array}{r|rrrrr} -2 & 1 & 5 & 2 & -6 & 4 \\ & \downarrow & -2 & -6 & 8 & -4 \\ \hline & 1 & 3 & -4 & 2 & 0 \end{array}$$

$$a^3 + 3a^2 - 4a + 2 + \frac{7}{a+2}$$

