

PC12 LG 12A (Formative Assessment)

Marking Teacher: _____

Name: _____

Student #: _____

1. For the function $y = (x + 2)(x - 3)(x + 5)$ determine each of the following:

a) x-intercept(s)

b) y-intercept(s)

c) the degree

d) end behaviour of the graph

e) the interval(s) where the function is positive

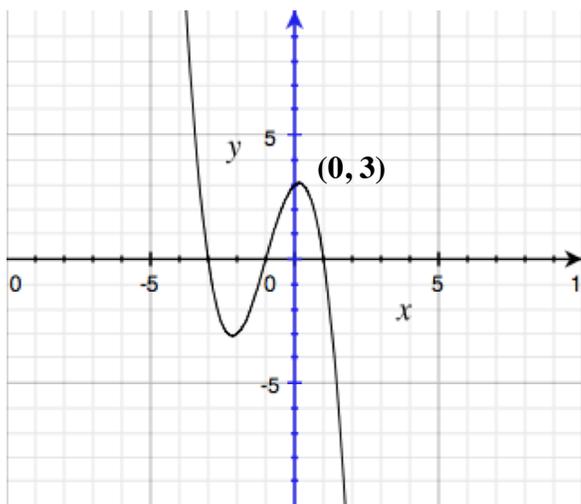
f) the interval(s) where the function is negative

2. For what value of k will the polynomial $x^3 + kx^2 + x + 5$ have a remainder of 3 when it is divided by $x + 2$.

3. Factor $4x^3 + 8x^2 - x - 2$ fully. You must show your synthetic or long division to receive full marks.

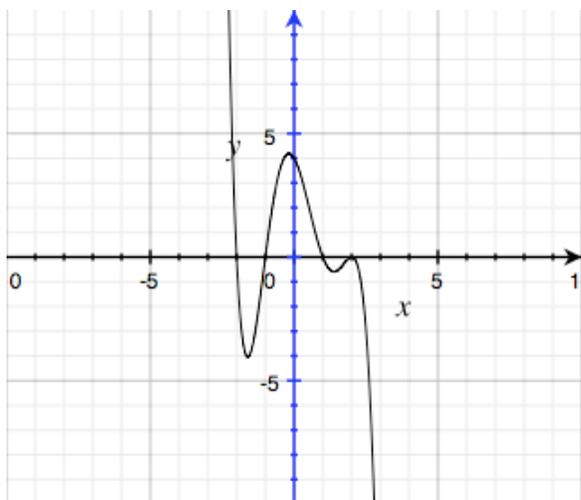
4. The zeros of a quartic function are -1, 2, and 3 (multiplicity 2). Determine the equation of the function that has these zeros and passes through the point (1, 24).

5. Use the graph of the given polynomial function to write its equation.



6. If the function $g(x)$ results from performing the following transformations on $f(x) = x^4$, find the equation for $g(x)$: $f(x)$ is vertically stretched (*EXPANDED*) by a factor of 5, reflected in the x -axis, translated 4 units left and 6 units up.

7. For the polynomial graphed below determine its least possible degree and the sign of the leading coefficient.



PC12 LG 12B (Formative Assessment)

Marking Teacher: _____

Name: _____

Student #: _____

1. For the function $y = (x - 1)(x + 3)(x - 4)$ determine each of the following:

a) x-intercept(s)

b) y-intercept(s)

c) the degree

d) end behavior of the graph

e) the interval(s) where the function is positive

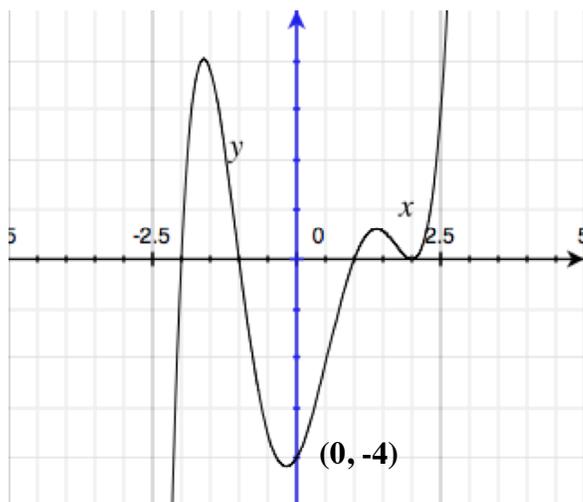
f) the interval(s) where the function is negative

2. For what value of k will the polynomial $2x^4 - 8x^2 + kx - 20$ have a remainder of 49 when it is divided by $x - 3$.

3. Factor $3x^3 + 2x^2 - 7x + 2$ fully. You must show your synthetic or long division to receive full marks.

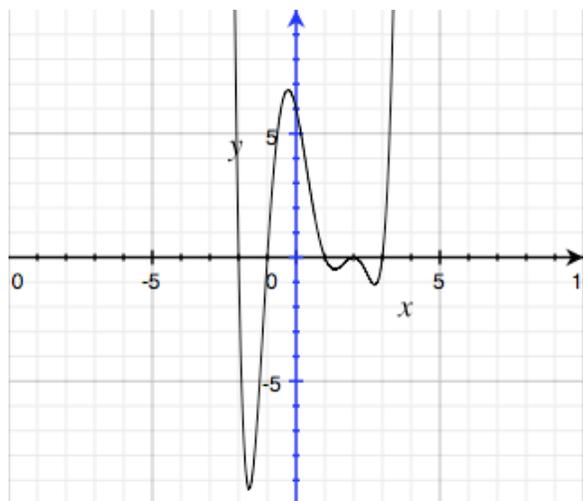
4. The zeros of a quartic function are 1, -2, and -4 (multiplicity 2). Determine the equation of the function that has these zeros and passes through the point (-3, 20).

5. Use the graph of the given polynomial function to write its equation.



6. If the function $g(x)$ results from performing the following transformations on $f(x) = x^3$, find the equation for $g(x)$: $f(x)$ is vertically stretched (*COMPRESSED*) by a factor of $\frac{1}{4}$, reflected in the y -axis, translated 7 units right and 8 units up.

7. For the polynomial graphed below determine its least possible degree and the sign of the leading coefficient.



Directions: See me about this Move on to next guide Review and redo