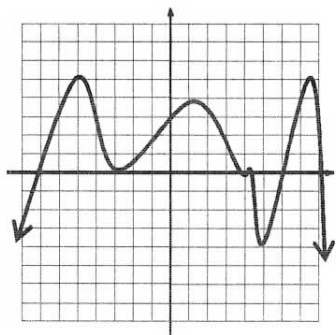


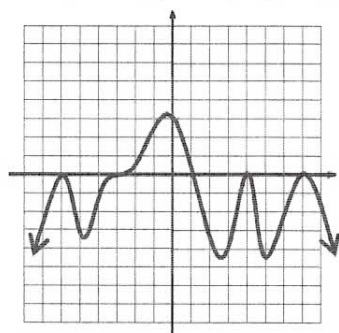
LT: 3A From Graph – to – Factored Form

Level *

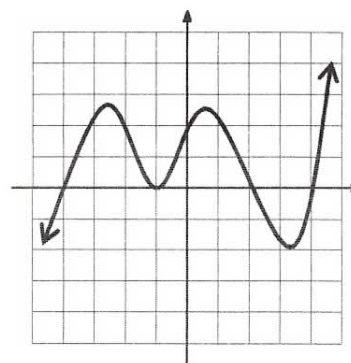
Write the equation for each polynomial graph shown.



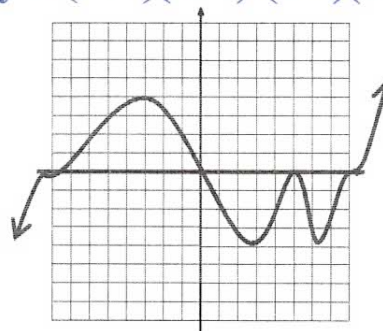
3. $y = -(x+7)(x+3)^2(x-4)^3(x-6)(x-8)$



5. $y = -(x+6)^2(x+3)^3(x-1)(x-4)^2(x-7)^2$



4. $y = (x+4)(x+1)^2(x-2)(x-4)$



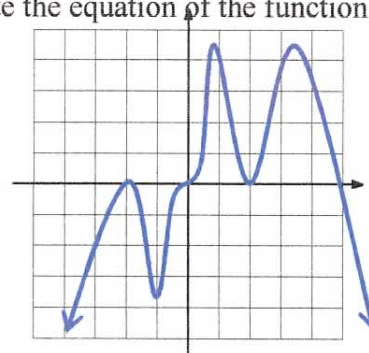
6. $y = x(x+8)^3(x-5)^2(x-8)^3$

LEVEL **

Sketch the graph of the equation with a double root at -2 , a single root at 5 , a triple root at 0 and a double root at 2 . Assume the leading coefficient is negative. Write the equation of the function that describes the graph.

Equation: _____

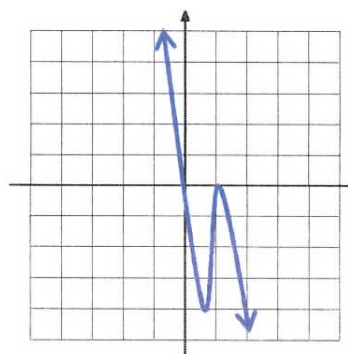
$y = -x^3(x+2)^2(x-2)^2(x-5)$



LEVEL ***

After factoring, sketch the graph of the equation $y = -x^3 + 2x^2 - x$

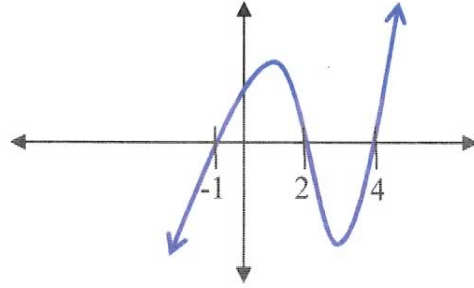
$y = -x(x-1)^2$



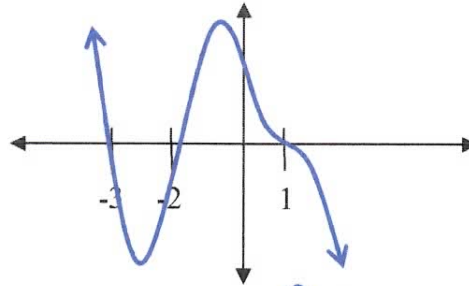
LT: 3A Factored Equation to Graph

Sketch the graph of each function.

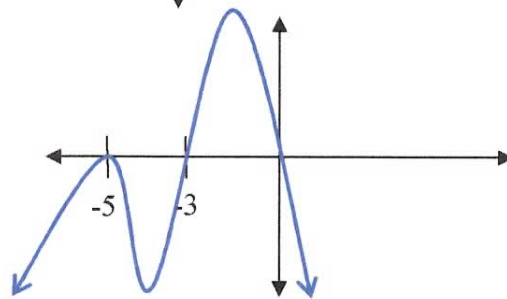
7. $f(x) = (x + 1)(x - 2)(x - 4)$



8. $f(x) = -(x + 3)(x + 2)(x - 1)^3$

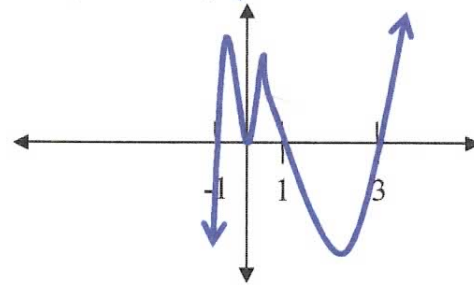


9. $f(x) = -x(x + 5)^2(x + 3)$



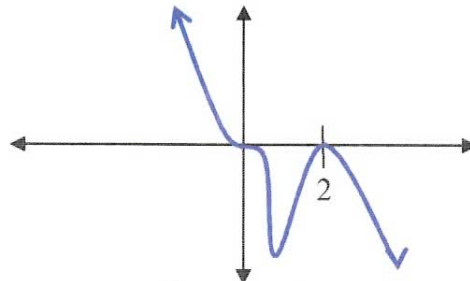
**10. $f(x) = x^5 - 3x^4 - x^3 + 3x^2$

$y = x^2(x-3)(x-1)(x+1)$



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

$y = -x^3(x-2)^2$



12. $f(x) = x^2(x - 1)^2(2 + x)$

