

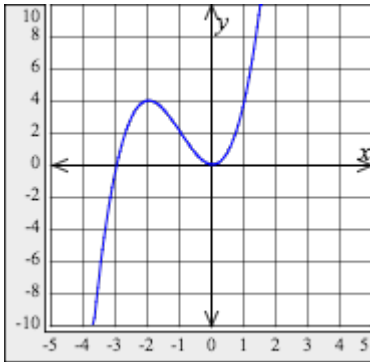
Alg 2.2.2 Homework

Question 1.

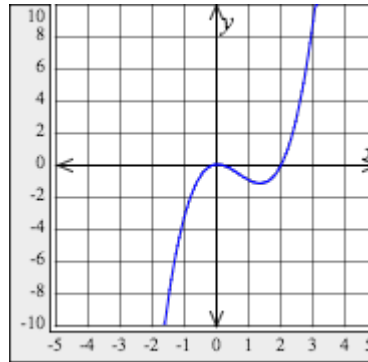
Select the graph of the polynomial function.

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

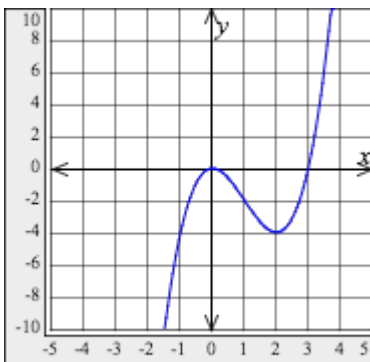
**A.**



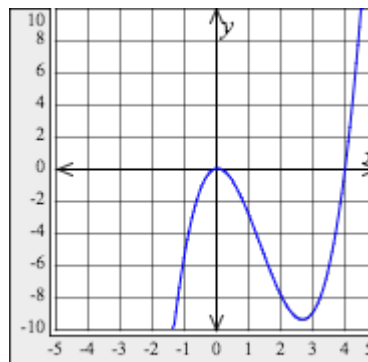
**B.**



**C.**



**D.**



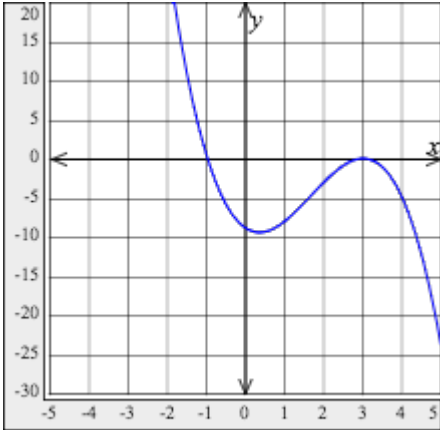
## Alg 2 2.2 Homework

Question 2.

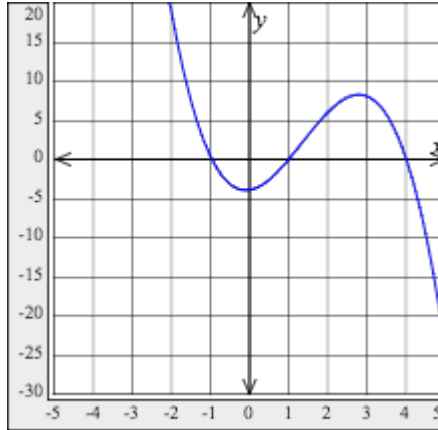
Select the graph of the polynomial function.

$$f(x) = -(x + 1)(x - 4)(x - 3)$$

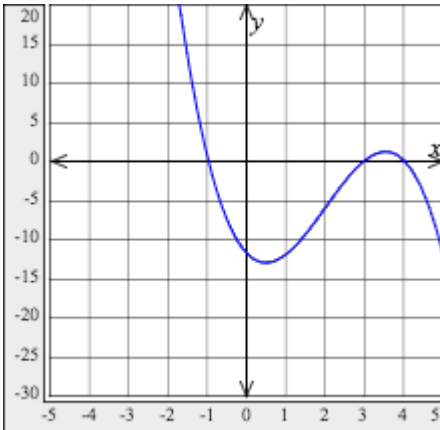
**A.**



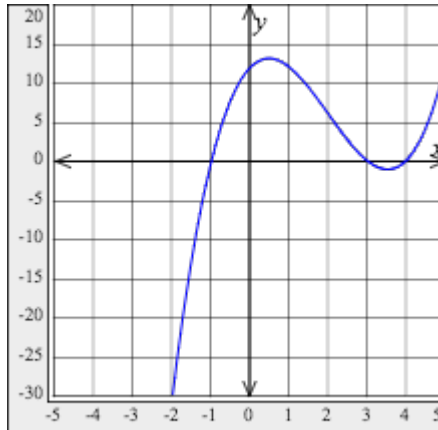
**B.**



**C.**



**D.**



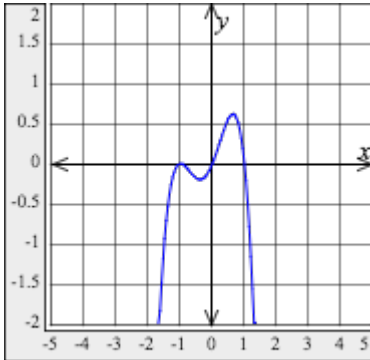
Alg 2 2.2 Homework

Question 3.

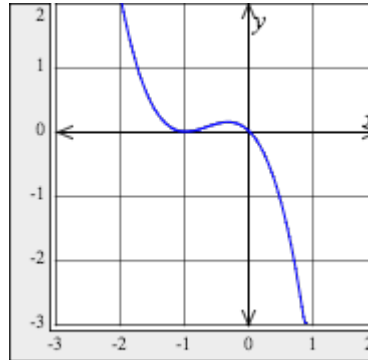
Select the graph of the polynomial function.

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

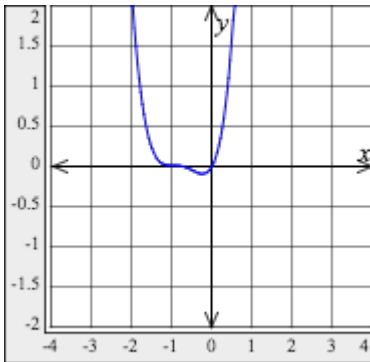
A.



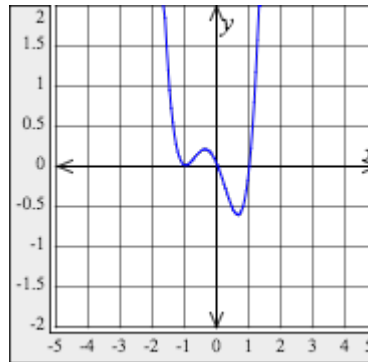
B.



C.



D.



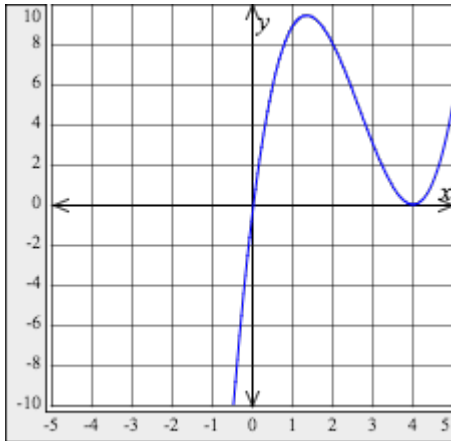
## Alg 2 2.2 Homework

Question 4.

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### Part 1

A student was asked to sketch the graph of the function  $f(x) = x^2(x - 4)$ . Drag and drop the correct numbers into the input boxes to complete the description of what the student did wrong. Then select the correct graph.



The student sketched the graph so that it crosses the  $x$ -axis at  $x = 0$  and is tangent to the  $x$ -axis at  $x = 4$ . Instead, the graph should be tangent to the  $x$ -axis at  $x =$   and cross the  $x$ -axis at

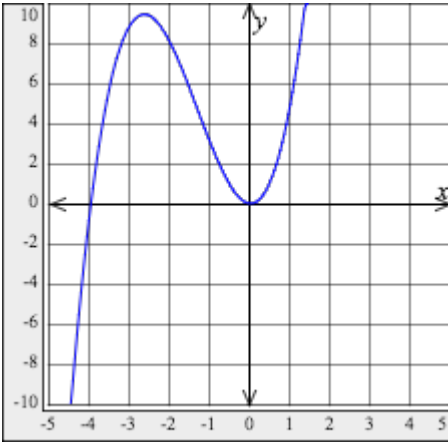
$x =$  .



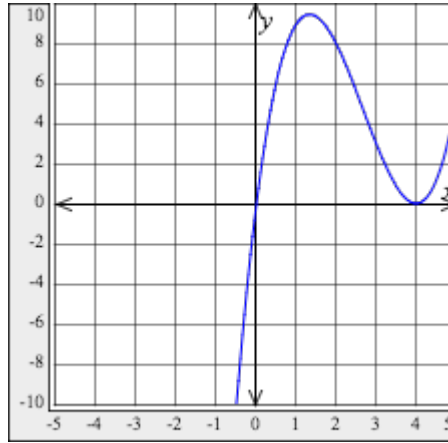
Part 2

Select the correct graph.

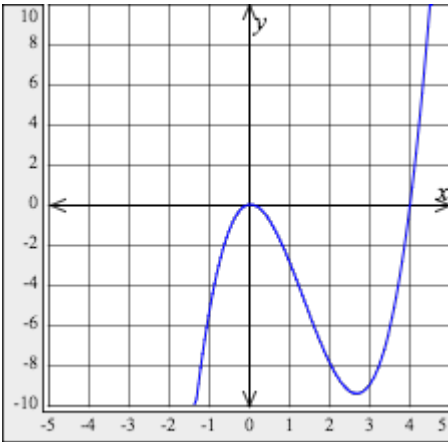
**A.**



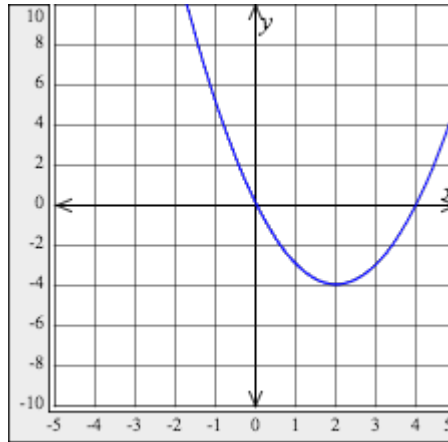
**B.**



**C.**



**D.**

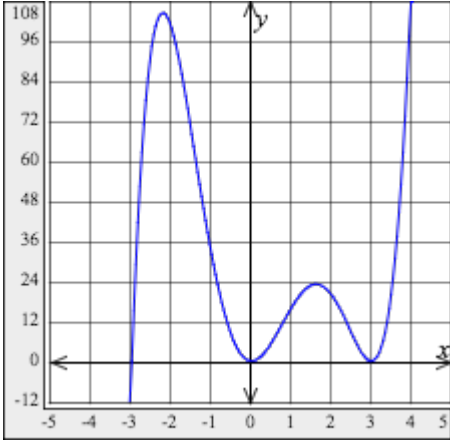


Alg 2 2.2 Homework

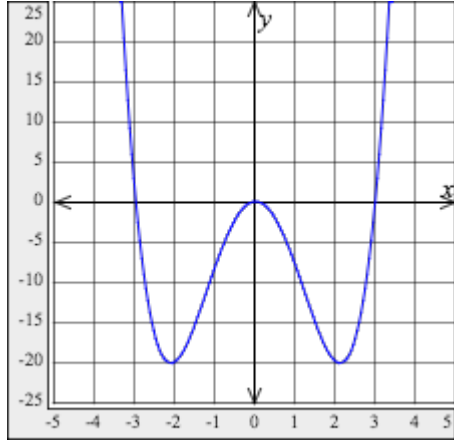
Question 5.

Knowing the characteristics of the graphs of cubic and quartic functions in intercept form, select the graph of the quintic function  $f(x) = x^2(x + 3)(x - 3)^2$ .

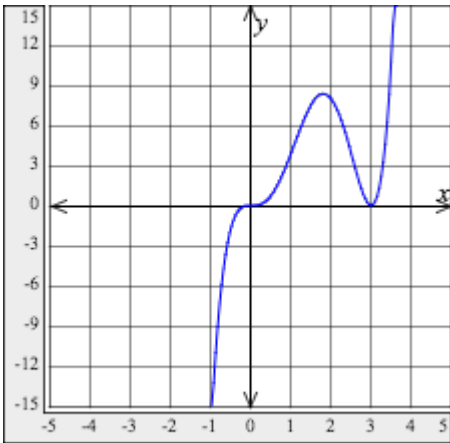
**A.**



**B.**



**C.**



**D.**

