PRINTABLE VERSION

Quiz 16

Question 1

The graph of $f(x)$ has x-intercepts at $x = -4$, $x = 3$, and $x = -3$. The graph of $f(x)$ resembles the graph of what function near the point $x = 3$?

$$f(x) = (x + 4)(x - 3)^{9}(x + 3)^{4}$$

a) $y = x$

b) $y = x^{5}$

c) $y = x^{9}$

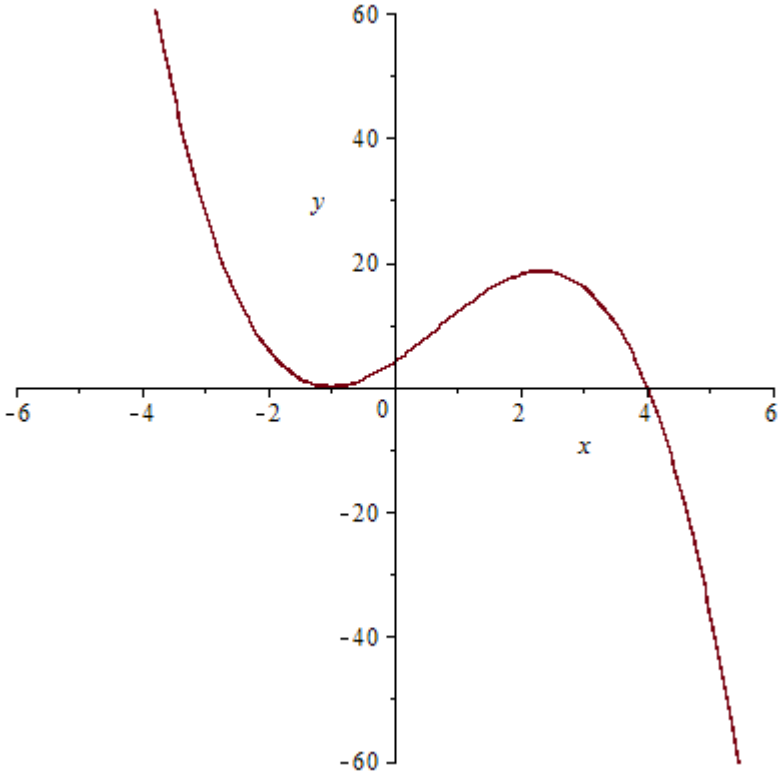
d) $y = x^{4}$

e) $y = x^{10}$

f) None of the above

Question 2

Which of the following functions could correspond to the graph below?



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

b) $f(x) = (x+1)^2(x+4)$

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

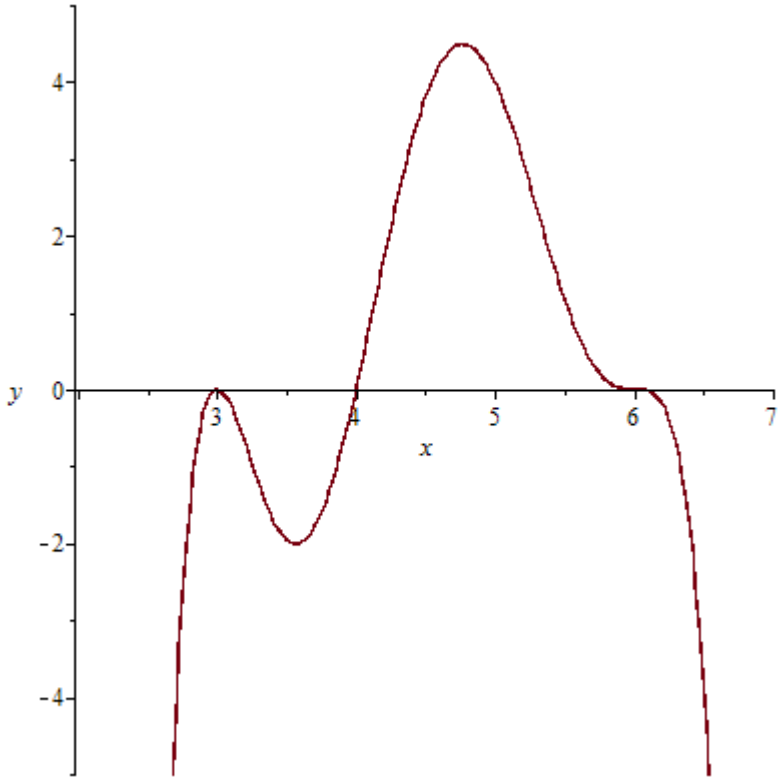
d) $f(x) = -(x+1)^2(x+4)$

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

f) None of the above

Question 3

Which of the following functions could correspond to the graph below?



a) $f(x) = -(x+3)(x-6)(x-4)$

b) $f(x) = -(x-3)^{2}(x-6)^{3}(x-4)$

c) $f(x) = (x+3)^{2}(x-6)(x+4)^{3}$

d) $f(x) = (x-3)^{3}(x+6)(x-4)$

e) $f(x) = -(x+3)(x-6)^{2}(x+4)$

f) None of the above

Question 4

Find the x-intercepts of

$$P(x) = (x-2)^{2}(x-9)^{4}(x+5)^{5}$$

a) $\{-1, 10, -5\}$

b) $\{-2, -9, 5\}$

c) $\{2, 9, -5\}$

d) $\{-2, 9, 5\}$

e) $\{2, -9, 5\}$

f) None of the above

Question 5

Find the y-intercept of

$$P(x) = (x+2)(x-2)(x+3)$$

a) -6

b) 6

c) 12

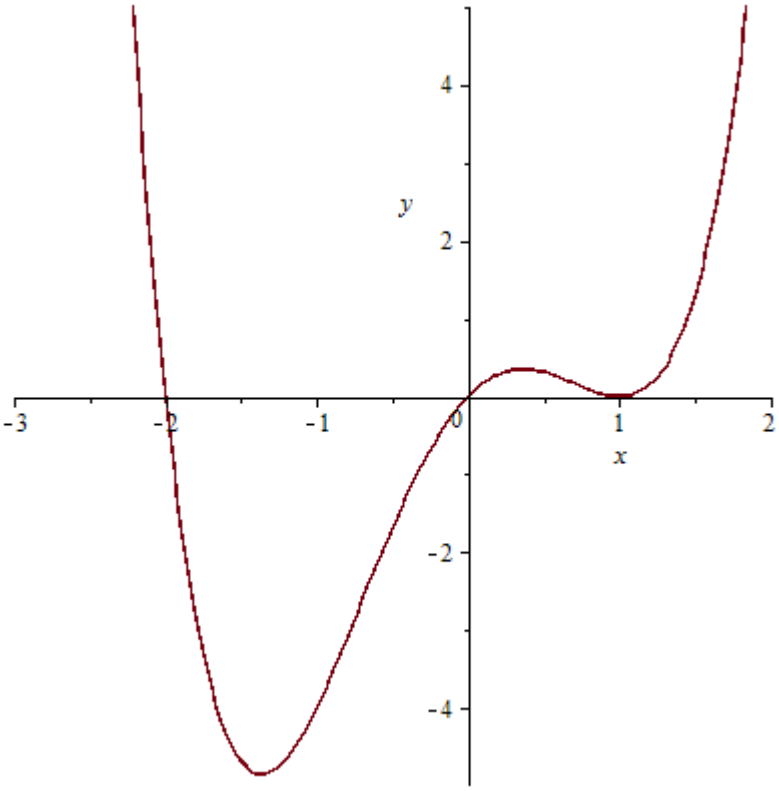
d) -12

e) -4

f) None of the above

Question 6

Which of the following functions could correspond to graph below?



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

b) $f(x) = (x-2)x(x-1)$

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

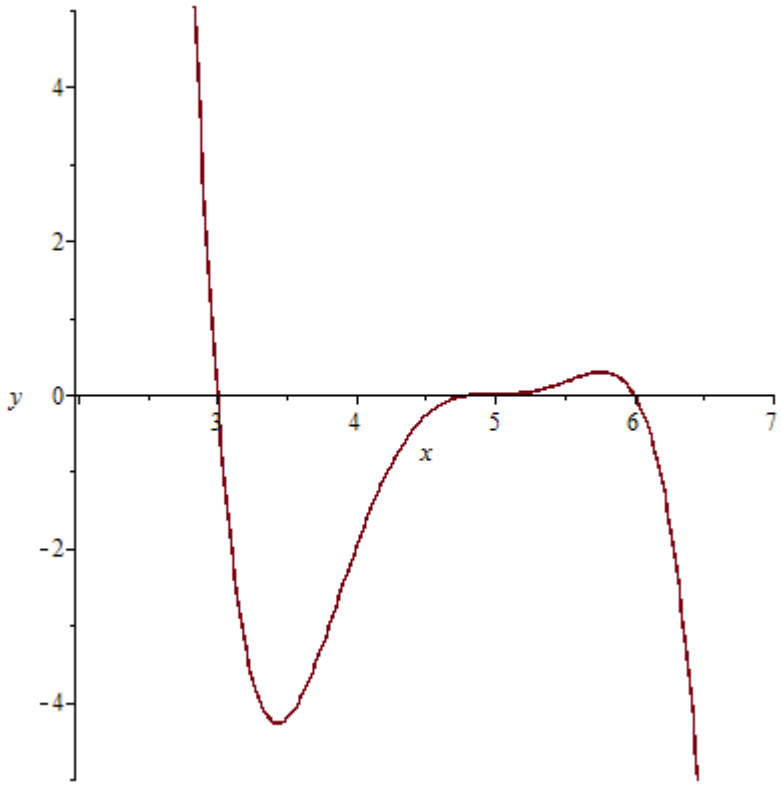
d) $f(x) = (x-2)x^2(x-1)^3$

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

f) None of the above

Question 7

Which of the following functions could correspond to the graph below?



a) $f(x) = (x+3)(x-6)(x-5)$

b) $f(x) = -(x-3)(x-6)(x-5)^3$

c) $f(x) = -(x+3)^2(x-6)(x+5)^3$

d) $f(x) = (x-3)^3(x+6)(x-5)$

e) $f(x) = -(x+3)(x+6)(x-5)^2$

f) None of the above

Question 8

You did not answer the question.

Given the polynomial

$$p(x) = 3x^8 - 10x^3 - 2x - 6$$

describe the end behavior of the graph of p.

a) ↙ ↘

b) ↖ ↘

c) ↙ ↗

d) ↗ ↖

e) ↖ ↗

f) None of the above

Question 9

You did not answer the question.

Given the polynomial

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

, the behavior of the x-intercept $x = 2$ resembles to the shape of

a) Cubic upward from left to right

b) Cubic downward from left to right

c) Parabola, downward

d) Increasing line

e) Decreasing line

f) None of the above

Question 10

You did not answer the question.

Given the polynomial

$$P(x) = 2x^4 - 26x^3 + 80x^2$$

, find all x-intercepts.

a) $x = 0$, $x = 13$, $x = 5$

b) $x = 0$, $x = 8$, $x = 5$

c) $x = -8$, $x = -5$

d) $x = 8$, $x = 5$

e) $x = 0$, $x = -8$, $x = -5$

f) None of the above