

MAC1140 SEC29 HW 08-31-2007 3.3

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Due: 09-05-2007

Full Name:

Sec#:

Extra Credit Attempted?

1.

[3.3.2bPT] Select the correct statement for $f(x) = (x+2)^2(x-3)(x^2+4)$

- $f(x)$ has a zero at $x = -2$ with multiplicity 2
- none of these
- $f(x)$ has a zero at $x = -3$ with multiplicity 1
- $f(x)$ has a zero at $x = -2$ with multiplicity 3
- $f(x)$ has a zero at $x = 2$ with multiplicity 2

2.

[3.3.3aPT] The graph of $f(x) = x^3(x+a)^2$, $a \neq 0$

- crosses the x -axis at $x = 0$ and crosses the x -axis at $x = -a$
- touches the x -axis at $x = 0$ and crosses the x -axis at $x = -a$
- none of these
-
- touches the x -axis at $x = 0$ and touches the x -axis at $x = -a$
- crosses the x -axis at $x = 0$ and touches the x -axis at $x = -a$

3.

[3.3.4aMSPT] Select ALL of the following that have zeros at -6, 0, 2.

- $y = 3x(x+6)(x-2)$
- None of these
- $y = 2(x+6)(x-2)$
- $y = x(x-6)(x+2)$
- $y = x(x+6)^2(x-2)$
- $y = x^2(x+6)(x-2)$

4.

[3.3.4aPT] Select the equation that has zeros at -2, -1, -4.

- $y = (x + 2)(x + 1)(x + 4)$
- $y = (x^2 + 2)(x + 1)^3(x + 4)$
- $y = 8(x - 2)(x - 1)(x - 4)$
- None of these
- $y = (x + 2)(x^2 + 1)(x + 4)$
- $y = (x - 2)(x - 1)(x - 4)$

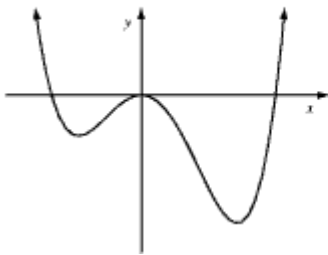
5.

[3.3.5aPT] Select the statement that is false for $f(x) = -(x - 1)(x + 6)^4$.

- The y -intercept of graph is 1296.
- f has two x -intercepts.
- f has degree 4.
- The graph of f behaves like $y = -x^5$ for large $|x|$.
- f has a local minimum at $x = -6$.

6.

[3.3.5bPT] Select the equation of the following graph



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