

3.3 Polynomial Functions

Attendance Quiz

1. The graph of $f(x) = (x^2 + 100)^2$
 - A. does not touch or cross the x -axis
 - B. touches the x -axis at $x = 10$ and crosses the x -axis at $x = -10$
 - C. touches the x -axis at $x = 10$ and touches the x -axis at $x = -10$
 - D. crosses the x -axis at $x = 10$ and crosses the x -axis at $x = -10$
 - E. crosses the x -axis at $x = 10$ and touches the x -axis at $x = -10$
2. Select the correct statement for $f(x) = (x - 2)^2(x - 3)(x^2 - 4)$
 - A. $f(x)$ has a zero at $x = 2$ with multiplicity 2
 - B. $f(x)$ has a zero at $x = 3$ with multiplicity 3
 - C. $f(x)$ has a zero at $x = 4$ with multiplicity 1
 - D. none of these
 - E. $f(x)$ has a zero at $x = 2$ with multiplicity 3