

MA002
Unit 3 Assessment
Quiz 7a: Section 3.1-3.2

1. Given the function $f(x) = -14x + 12 + 2x^3$, find the following:
- a. Degree
 - b. Leading term
 - c. Leading coefficient
 - d. What is the long run behavior of this function?
 - i. As $x \rightarrow$ $f(x) \rightarrow$
 - ii. As $x \rightarrow$ $f(x) \rightarrow$

2. The function $f(x)$ can also be written in factored form:
$$f(x) = 2(x-1)(x+3)(x-2)$$

Short run behavior includes finding the intercepts.
Find the horizontal and vertical intercept(s), and list them as coordinates.

3. Given the function $g(x)$, find the coordinates of the vertex.

$$g(x) = -3x^2 + 12x$$