

Math 111 Quiz #7 Answers

1. Vertex: $(-2, -11)$ Range: $y \geq -11$

2. $y = \frac{1}{4}(x - 3)^2 - 1$

3. Here are a couple of possible answers:

- $u(x) = x^7, \quad v(x) = 3x^2 + 10$
- $u(x) = (x + 10)^7, \quad v(x) = 3x^2$

4. (a) $f(g(0)) = 4$ (since $g(0) = 1$)

(b) i. $f(3) + g(3) = 0 + 4 = 4$

ii. $f(3) \cdot g(3) = 0 \cdot 4 = 0$