

## Math 111 Quiz #9 Answers

- $f(x) = -\frac{1}{4}x(x+1)(x-3)(x-4)$
- (a) Domain:  $x \neq 0, x \neq 2, x \neq -2$  (Consider when the denominator is equal to 0.)

(b) Horizontal Asymptotes:  $y = 0$  (Long-run behavior)

Vertical Asymptotes:  $x = 0, x = 2, x = -2$

(c)  $x = 4, x = 1$  (Consider when the numerator is equal to 0).
- Rate needed =  $r = 0.25$  or 25% (Solve  $200 = 100(1 + 4r)$ .)