

Name: _____

QUIZ 7
305G 10-8-08

- (1) The domain of the composite function $f \circ g$ is a subset of the domain of the function _____.
- (2) A function is _____ if any two different inputs in the domain correspond to two different outputs in the range.
- (3) Solve the inequality $x^4 \geq -3x^2$

(4) Consider the rational function $R(x) = \frac{(x-3)^2(x+1)}{(x-1)^4}$

a. Is $R(x)$ in lowest terms? Explain.

b. What are the zeros of $R(x)$?

c. What are the vertical asymptotes?

d. Is $R(x)$ a proper rational function? Explain.

e. Write the **equation** of one horizontal asymptote.