Math 270 - Basic Discrete Mathematics
Practice Quiz on Section 3.2
Solutions

Directions: Answer the problem given below.

1. Write negations for the followings statements:

a. $\forall$ real numbers x, $x^4 \geq 0$.

$\exists$ real number x such that $x^4 < 0$.

b. $\exists$ an integer a such that $3a^2 - 2a = 0$.

$\forall$ integer a, $3a^2 - 2a \neq 0$.

c. For all rational numbers a and b, $a - b$ is rational.

There exist rational numbers a and b such that $a-b$ is irrational.

d. There exists a real number x such that $x^3 = -2$.

For all real numbers x, $x^3 \neq -2$.

e. For all integers d, if $6/d$ is an integer, then $d = 3$

There exists an integer d such that $6/d$ is an integer and $d \neq 3$.

f. There is a rectangle R which is not a square.

For all rectangles R, R is a square.