

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

**Directions:** Answer the problem given below.

1. Write negations for the followings statements:

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

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

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

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

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

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