**QUIZ#01 MATH 022 SECTION 12**

Name:

1. Given a square with side of length $s$, diagonal of length $d$, perimeter of length $p$, and area $A$, which of the following is true?

a) $A$ written as a function of $p$ is $A = \frac{1}{4}p^2$

b) $p$ written as a function of $d$ is $p = 2\sqrt{2}d$

c) $d$ written as a function of $A$ is $A = 0.5d^2$

d) $s$ written as a function of $d$ is $s = 0.5d$

2. For what values of $x$ is $\frac{5}{\sqrt{2-3x}}$ a real number?

a)$(-\infty, \frac{2}{3})$

b) $[\frac{2}{3}, \infty)$

c) $(-\infty, \infty)$

d) $(-\infty, \frac{2}{3}]$

3. The average rate of change of the function $f(x) = \sqrt{x+1}$ on the interval [0,3] is

a) 1.5

b) 2

c) $\frac{1}{3}$

d) $\sqrt{x+h} - \sqrt{x+h}$

4. $f(x) = 3x^2 - 2x + 1$, compute the difference quotient $\frac{f(x+h)-f(x)}{h}$

a) $6x + 3h - 2$

b) $3h^2 - 2h$

c) $3xh - 2$

d) $3x^2h - 2xh$

5. The decreasing interval of $f(x) = \begin{cases} 1 - x^2 & \text{for} \quad -1 \leq x \leq 1 \\ x - 1 & \text{for} \quad x > 1 \end{cases}$ is

a) $[-1, 1]$

b) $[0, 1]$

c) $(-\infty, 0]$

d) $[1, \infty)$

6. (Optional) How do you think about Math 22 homework?

a) Too much, cut half of it.

b) It's boring, give me some interesting problems.

c) Not enough, I need more practice.

d) That's ok.

e) Other: