

King Fahd University of Petroleum and Minerals

Math Prep-Year Program Math 001

Term 061

Quiz# 1

Name: \_\_\_\_\_

ID#: \_\_\_\_\_ Sec. 47

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**Q1** Let  $A = \{x \mid x \text{ is odd and } 8 < x \leq 23\}$ ,

$B = \{y \mid y = 5x - 3, \text{ where } x \text{ is natural less than } 5\}$ .

Find  $A \cap B$ .

**Q2.** Write without absolute value symbols

$$\left| \frac{x+7}{|x|+|x-1|} \right|, 0 < x < 1.$$

**Q3.** Simplify and rationalize the following

a)  $\frac{2}{\sqrt[5]{8x^{23}y^{11}}}$

b)  $\frac{\sqrt{2}}{3\sqrt{3} + \sqrt{5}}$

**Q4.** Use absolute value notation to describe the distance between  $z$  and  $-3$  greater than 4.

**Q5.** Find the coefficient of  $x^3$  in the product  $(2x^2 + 1)(x^2 - x)^3$