

**King Fahd University of Petroleum and Minerals**  
**Mathematical Sciences Department**  
**Math 001-Quiz # 1 (061)**

**Student's Name:**..... **ID:** ..... **.SEC:** .....

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Q1) Which **one** of the following is an **irrational number**:

a)  $\pi \div \frac{22}{7}$

b)  $(0.\overline{136})^2$

c)  $(\sqrt{2})(\sqrt{8})$

d)  $0.23 \times 10^{-400}$

e)  $\frac{3\pi}{2\pi}$

Q2) If  $-3 < x < -1$ , then write the expression  $|3 + x| + |2 + 2x| + || - x ||$  without absolute value.

Q3) If  $x < y$ , then simplify  $\left[ (x^2 - 2xy + y^2) \right]^{\frac{1}{2}} + \left[ (x - y)^3 \right]^{\frac{1}{3}}$

Q4) Simplify  $\sqrt[4]{32} - \frac{2}{\sqrt[4]{8}}$