

Math 002 P1

Quiz # 1

Name: Key

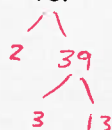
September 2, 2014 No electronic devices or interpersonal communication allowed. Show work to get credit.

- (1) What property of real numbers is demonstrated by the equality $2(\pi x) = (2\pi)x$?

Associativity of multiplication

- (2) Find the prime factorization of 78.

$$2 \cdot 3 \cdot 13$$



- (3) Find the least common multiple of 10, 12, and 22. (You may leave your answer as a product.)

$$10 = 2 \cdot 5$$

$$12 = 2^2 \cdot 3$$

$$22 = 2 \cdot 11$$

$$lcm = 2^2 \cdot 3 \cdot 5 \cdot 11 (= 660)$$

- (4) Simplify (write as one fraction in least terms) $\frac{1}{15} + \frac{6}{35}$.

$$15 = 3 \cdot 5$$

$$35 = 5 \cdot 7$$

$$lcm = 3 \cdot 5 \cdot 7$$

$$= \frac{7}{3 \cdot 5 \cdot 7} + \frac{6 \cdot 3}{3 \cdot 5 \cdot 7} = \frac{25}{3 \cdot 5 \cdot 7} = \frac{5}{3 \cdot 7} = \frac{5}{21}$$

- (5) Simplify (write as one fraction in least terms) $\frac{3}{8} \div \frac{6}{5}$.

$$= \frac{3}{8} \cdot \frac{5}{6} = \frac{1}{8} \cdot \frac{5}{2} = \frac{5}{16}$$