

AMI DAY 3 Name: _____ Date: _____

Directions: Do Each problem and show all work.

1. Sebastian bought a meal at a restaurant and left a 15% tip. With the tip, he paid exactly \$35.19. How much was the bill before the tip was added?
 - a. \$28.98
 - b. \$29.91
 - c. \$30.15
 - d. \$30.60
 - e. \$30.85

2. If $x^2 - x - 2 > 0$, which of the following is the solution set for x ?
 - a. $x > -1$
 - b. $x > 2$
 - c. $-1 < x < 2$
 - d. $x < -1$ or $x > 2$
 - e. No solutions are possible

3. Doug who runs track for his high school, was challenged to a race by his younger brother, Matt. Matt started running first, and Doug didn't start running until Matt had finished a quarter-mile lap on the school track. Doug passed Matt as they both finished their sixth lap. If both boys ran at a constant speed, with Doug running 2 miles per hour faster than Matt, what was Matt's speed?
 - a. 10.5 mph
 - b. 10 mph
 - c. 9 mph
 - d. 8 mph
 - e. 7.5 mph

4. When she chooses a password, Eloise always uses exactly ten different characters: five letters (A, B, C, D, and E) and five numbers (2, 3, 4, 5, and 6). Additionally, she always ensures that no pair of letters is consecutive and that no pair of numbers is consecutive. How many different passwords conform to these rules?
 - a. Fewer than 1000
 - b. Between 1000 and 10,000
 - c. Between 10,000 and 100,000
 - d. Between 100,000 and 1,000,000
 - e. More than 1,000,000

5. If the least common multiple of 9, 10, 12 and v is 540, which of the following could be v ?
 - a. 18
 - b. 24
 - c. 27
 - d. 36
 - e. 45