

AMI DAY 1 Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Directions:** Do Each problem and show all work.

1. If you multiply two integers together and then add 4, the result is 40. Which of the following could NOT be the sum of the two numbers?
  - a. 12
  - b. 13
  - c. 15
  - d. 18
  - e. 20
  
2. If  $a$  and  $b$  are the two values of  $t$  that satisfy the equation  $t^2 - 6t + 8 = 0$ , with  $a > b$ , what is the value of  $a - b$ ?
  - a. 2
  - b. 4
  - c. 6
  - d. 8
  - e. 10
  
3. What is the  $x$ -intercept of a line that passes through the point  $(3, 4)$  and has a slope of 2?
  - a. -2
  - b. -1
  - c. 0
  - d. 1
  - e. 2
  
4. Anne and Katherine are both saving money from their summer jobs to buy bicycles. If Anne had \$150 less, she would have exactly one third as much as Katherine. And if Katherine had twice as much, she would have exactly 3 times as much as Anne. How much money have they saved together?
  - a. \$300
  - b. \$400
  - c. \$450
  - d. \$625
  - e. \$750
  
5. On a standard  $xy$ -graph, what is the distance between  $(-2, 4)$  and  $(1, -2)$ ?
  - a. 5
  - b.  $3\sqrt{2}$
  - c.  $2\sqrt{3}$
  - d.  $5\sqrt{3}$
  - e.  $3\sqrt{5}$