#### Date:

#### **BLM 6.CT.1**

# **Chapter 6 Test**

## **Multiple Choice**

For each question, select the best answer.

- 1. Which are the slope and *y*-intercept of the line y = -x 4?
  - **A** m = 0, b = -4
  - **B** m = 0, b = 4
  - **C** m = 1, b = 4
  - **D** m = -1, b = -4
- 2. What are the *x* and *y*-intercepts of the line 3x + 2y = 12?
  - **A** *x*-intercept = 4, *y*-intercept = -6
  - **B** *x*-intercept = -4, *y*-intercept = -6
  - **C** *x*-intercept = -4, *y*-intercept = 6
  - **D** *x*-intercept = 4, *y*-intercept = 6
- 3. What is the slope of a line parallel to 4x + 2y = 7?

Α	2	B	-2
С	$\frac{1}{2}$	D	$-\frac{1}{2}$

- 4. What is the slope of a line perpendicular to 2x y = 3?
  - **A** 2 **B** -2**C**  $\frac{1}{2}$  **D**  $-\frac{1}{2}$
- 5. Which is the solution to the linear system y = 2x and y = x + 4? A (4, 1) B (4, -2)

### **Short Response**

6. Rearrange 8x + 2y + 11 = 0 into the form y = mx + b.

**7.** Frank recorded his motion with a motion sensor and produced this graph.



- a) How far was Frank from the motion sensor when he started moving?
- **b**) Was Frank moving toward the motion sensor or away from it? How fast was he moving?
- c) Write an equation that describes this distance-time relationship.
- **8.** Find an equation for a line
  - **a**) with slope 6 passing through (-1, 4)
  - **b**) that passes through (-5, 0) and (5, 6)

### Extend

Show all your work.

- 9. A line is parallel to 5x + 2y 8 = 0 and has the same *y*-intercept as x + 4y - 12 = 0. Find an equation for the line.
- 10. A retail store offers two different hourly compensation plans: Plan A: \$9.00 per hour Plan B: \$7.50 per hour worked plus a \$4.50 shift bonus.
  - a) Graph the linear system. When would the earnings from the two plans be the same?
  - **b**) Describe a situation under which you would choose each plan.

1. D

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#### BLM 6.CT.1

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The earnings per shift under both plans are \$27 when you work 3 h.

**b)** I would choose Plan A if I usually work more than 3 h each shift. If I work fewer than 3 h per shift, I would choose Plan B.