

Additional Practice**Investigation 2****Moving Straight Ahead**

1. Do parts (a)–(e) for each equation below.
- Graph the equation on your calculator, and make a sketch of the line you see.
 - What ranges of x - and y -values did you use for your window?
 - Do the y -values increase, decrease, or stay the same as the x -values increase?
 - Give the y -intercept.
 - List the coordinates of three points on the line.
 - $y = 2.5x$

ii. $y = -2x + 7$

iii. $y = -4x - 8$

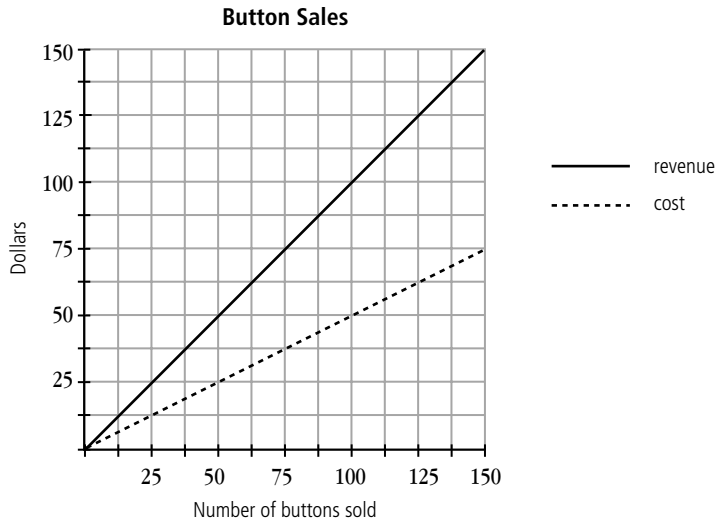
iv. $y = 3x - 3$

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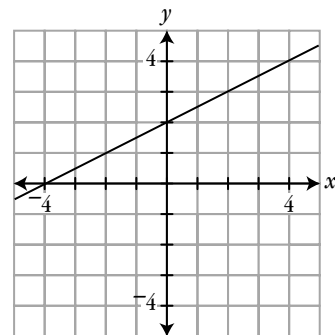
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2. The volleyball team decided to raise money for an end-of-season party by selling school buttons. The costs and the revenue of selling the buttons are shown on the graph below.



- a. If the team sells 50 buttons, what will be their cost? What will be the revenue?
 - b. If the team sells 50 buttons, how much profit will they make? (Remember that the profit is the revenue minus the cost).
 - c. If the team sells 100 buttons, how much profit will they make?
3. a. Graph the equation $y = 5x + 7$ on your calculator. Use the graph to find the missing coordinates for these points on the graph: $(2, ?)$, $(?, 52)$, and $(2.9, ?)$.
- b. Graph the equation $y = 1.5x - 4$ on your calculator. Use the graph to find the missing coordinates for these points on the graph: $(10, ?)$ and $(?, 32)$.
- c. Graph the equation $y = 6.25 - 3x$ on your calculator. Use the graph to find the missing coordinates for these points on the graph: $(5, ?)$ and $(-2.75, ?)$.

4. Use the graph below to answer parts (a)–(d).
- a. List the coordinates of three points on the line.
 - b. Which equation below is the equation of the line?
 - i. $y = x + 4$
 - ii. $y = 0.5x + 2$
 - iii. $y = 0.5x - 5$
 - iv. $y = 4 - 0.5x$



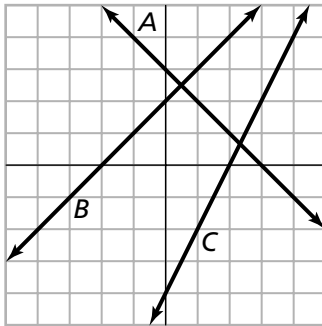
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- c. Does the point (56, 35) lie on the line? Explain.
- d. Does the point (-20, -8) lie on line? Explain.

5. Use the graph of the three lines to complete the table.



Line	Constant Rate of Change	y-intercept	x-intercept
A			
B			
C			

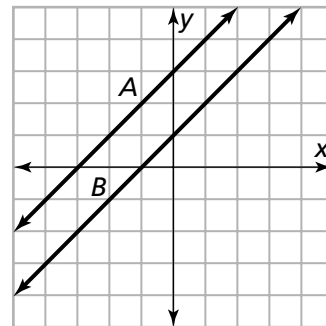
$y = 2 + x$, $y = -4 + 2x$, $y = 3 - x$

b. Match each line on the graph with one of the above equations.

line A: _____, line B: _____, line C: _____

6. Use the graph of the two lines at the right.

a. What is alike about these lines? What is different?



b. The equation for line A is $y = x + 3$. What do you think would have to change in the equation to make the equation for line B? Explain.

c. Write the equation for line B.

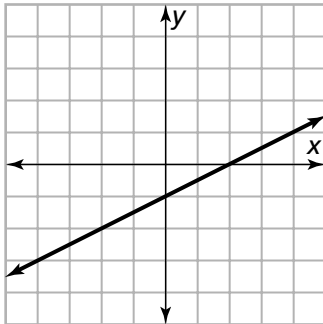
d. Imagine a line halfway between lines A and B. What is its equation? Explain.

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7. a. Use the graph below to complete the table.



x	-3	0	2	5	7	10	100
y							

b. Explain your reasoning for the last three y-values.

8. a. For each pair of lines, find the point of intersection.

$y = x$ and $y = -x$

$y = x + 1$ and $y = -x + 1$

$y = x + 3$ and $y = -x + 3$

$y = x - 4$ and $y = -x - 4$

b. What pattern do you see?

c. Without graphing the lines, where is the point of intersection of these lines?

$y = x + 137$ and $y = -x + 137$