

Name:

## Connecting Algebra and Geometry | 7.6

Ready, Set, Go!



<http://www.flickr.com/photos/dean/21202433@N08/>

## Ready

Topic: Finding percentages.

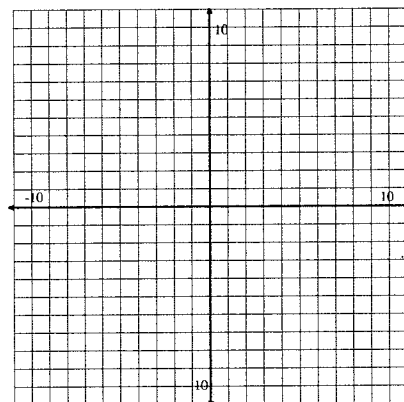
**Mrs. Gonzalez noticed that her new chorus class had a lot more girls than boys in it. There were 32 girls and 17 boys. (Round answers to the nearest %.)**

1. What percent of the class are girls?
2. What percent are boys?
3. 68% of the girls were sopranos.
  - a. How many girls sang soprano?
  - b. What percent of the entire chorus sang soprano?
4. Only 30% of the boys could sing bass.
  - a. How many boys were in the bass section?
  - b. What percent of the entire chorus sang bass?
5. Compare the number of girls who sang alto to the number of boys who sang tenor. Which musical section is larger? Justify your answer.

## Set

Topic: Graphing exponential equations

6. Think about the graphs of  $y = 2^x$  and  $y = 2^x - 4$ .
  - a. Predict what you think is the same and what is different.
  - b. Use your calculator to graph both equations on the same grid. Explain what stayed the same and what changed when you subtracted 4. Identify in what way it changed.



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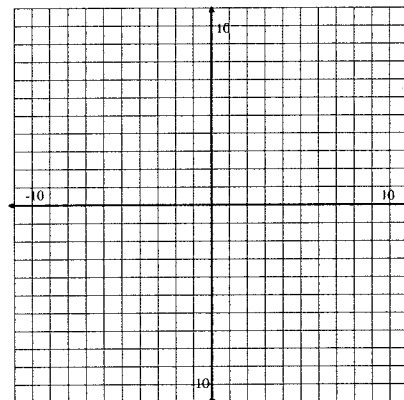
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Name: \_\_\_\_\_

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7. Think about the graphs of  $y = 2^x$  and  $y = 2^{(x-4)}$
- a. Predict what you think is the same and what is different.

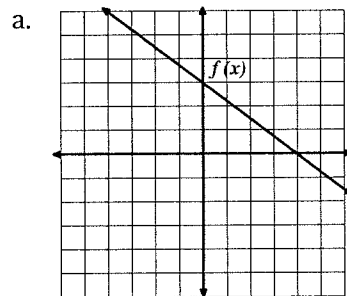
- b. Use your calculator to graph both equations on the same grid.  
Explain what stayed the same and what changed.  
Identify in what way it changed.

**Go**

Topic: Vertical translations of linear equations

The graph of  $f(x)$  and the translation form equation of  $g(x)$  are given. Graph  $g(x)$  on the same grid and write the slope-intercept equation of  $f(x)$  and  $g(x)$ .

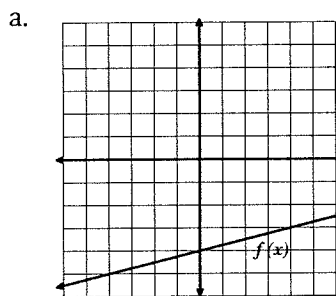
8.  $g(x) = f(x) - 5$



b.  $f(x) =$  \_\_\_\_\_

c.  $g(x) =$  \_\_\_\_\_  
Slope-Intercept form

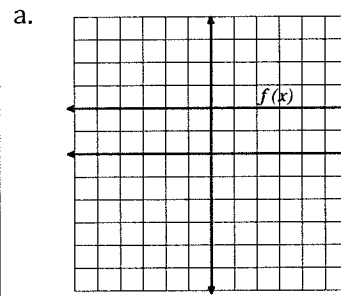
9.  $g(x) = f(x) + 4$



b.  $f(x) =$  \_\_\_\_\_

c.  $g(x) =$  \_\_\_\_\_  
Slope-Intercept form

10.  $g(x) = f(x) - 6$



b.  $f(x) =$  \_\_\_\_\_

c.  $g(x) =$  \_\_\_\_\_  
Slope-Intercept form

Need Help? Check out these related videos:

<http://www.khanacademy.org/math/arithmatic/percents/v/identifying-percent-amount-and-base>

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