

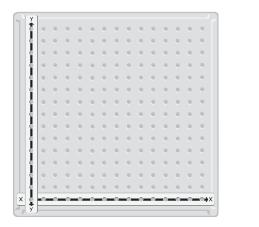
### Use an XY Coordinate Pegboard. Complete the model to answer the question.

1. You can buy 3 pounds of bananas for \$2 or 9 pounds for \$6. Is the relationship proportional?

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# Using an XY Coordinate Pegboard, model the problem. Draw the model and use it to answer the question.

**2.** In a bag, there are 4 red balls and 6 blue balls. In a second bag, there are 12 red balls and 8 blue balls. Is the relationship proportional?



### Use Centimeter Grid Paper to determine if the relationship is proportional.

- **3.** A baseball player got 14 hits in 35 turns at bat and 32 hits in 80 turns. Is the relationship proportional?
- **4.** If 20 people are ahead of you in the lunch line, it takes 12 minutes to get your lunch. If 30 people are ahead of you, it takes 18 minutes. Is the relationship proportional?

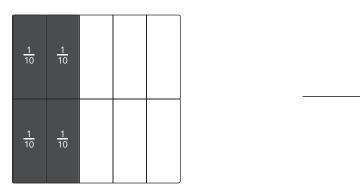
**<sup>5.</sup>** It rained 15 times in 40 days, and it rained 45 times in 100 days. Is the relationship proportional?

**Challenge!** Explain how you make a graph to determine if some data are in a proportional relationship. Make up an example of a proportional relationship.

## Use Fraction Squares. Complete the model to answer the question.

1. In the teacher's pencil jar, there are 10 pencils, 4 of which do not have an eraser. In Julio's pencil bag, there are 5 pencils, 3 of which do not have an eraser. Is the relationship proportional?

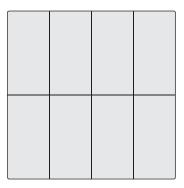
Name



**Ratios and Proportional Relationships** 

# Using Fraction Squares, model the problem. Draw the model and use it to answer the question.

**2.** In a bag of 4 instruments, 2 instruments are shakers. In a box of 8 instruments, 4 are shakers. Is the relationship proportional?



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#### Use Fraction Squares to determine if the relationship is proportional.

- **3.** In PE, 5 of every 6 girls finished a run in less than 10 minutes. Two of every 3 boys finished in less than 10 minutes. Is the relationship proportional?
- **4.** Sal paid \$2 for 4 pounds of grapes. Bo paid \$1 for 2 pounds of grapes. Is the relationship proportional?

#### Use equivalent ratios to determine if the relationship is proportional.

- 5. Roberto can ride his bike 4 miles in 20 minutes. Patricia can ride her bike 10 miles in 50 minutes. Is the relationship proportional?
- 6. Pearla answered 4 of the 5 questions right on the quiz. Then, on the test, she answered 15 of the 20 questions right. Is the relationship proportional?

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**Challenge!** Ms. Turny's class ratio of boys to girls is 2:3, and Mr. Straight's class ratio of boys to girls is 8:12. Explain how you know if the data portrays a proportional relationship.

### Use an XY Coordinate Pegboard. Build the model and use it to answer the question.

**1.** For every 2 apples in Kali's orchard, there are 4 pears. In Sam's orchard, there are 10 pears for every 5 apples. If the number of pears is proportional to the number of apples, what is the constant of proportionality?

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# Using an XY Coordinate Pegboard, model the problem. Draw the model and use it to answer the question.

**2.** Yesterday, Maria had 4 nickels and 3 dimes in her wallet. Today, she has 12 nickels and 9 dimes. If the number of dimes is proportional to the number of nickels, what is the constant of proportionality?

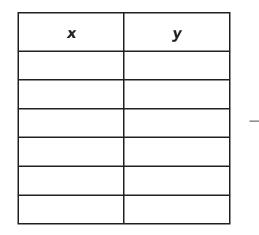
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#### Use Centimeter Grid Paper to find the constant of proportionality for the relationship.

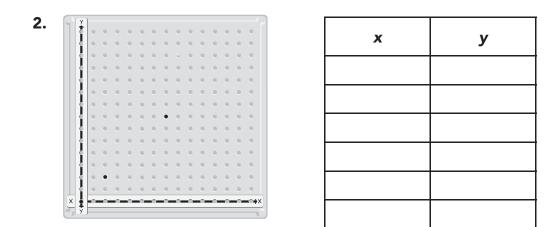
- 3. Carson can jump 30 times in 18 seconds. He can jump 20 times in 12 seconds. Assume that the number of times Carson can jump is proportional to the number of seconds he is given.
- 4. Cleo bought 36 stamps and paid \$12. Ned paid \$6 for 18 stamps. Assume the amount paid for stamps is proportional to the number of stamps purchased.
- 5. Sheila made 14 threepoint shots in 35 attempts. She made 32 three-point shots in 80 attempts. Assume the number of three-point shots Sheila makes is proportional to her number of attempts.

**Challenge!** Caitlyn read 2 books in 8 days. She read 4 books in 16 days. Assume that the number of books Caitlyn reads is proportional to the number of days she spends reading. Find the constant of proportionality for the relationship. Identify the point on a graph of the relationship that directly names the value of the constant. Explain why that point works. Use an XY Coordinate Pegboard to plot the points shown. Make a table of ordered pairs. Graph the line. Write an equation.

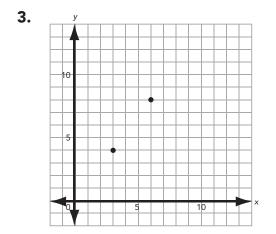
1.



Using an XY Coordinate Pegboard, graph the line that passes through the points given on the grid. Sketch the line. Make a table of ordered pairs. Write an equation.



Graph a line that passes through the given points. Make a table of ordered pairs. Write an equation.



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**Challenge!** How many points must you have to make a line? Why is it good to have three points to make a line?