

## LESSON

## 1-8

**Problem Solving****Introduction to Functions**

Write the correct answer.

- The number of teachers at a university is  $\frac{1}{15}$  the number of students. Write a rule for the number of teachers at the university.  

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- Use the rule in problem 1 to write ordered pairs for the number of teachers when there are 1230, 1500, 3045, and 4515 students.  

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- The starting salary for a new teacher in a certain school district is \$29,000 plus \$2100 for each year of previous teaching experience. Write a rule for the starting salary of a teacher in this school district.  

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- Use the rule in problem 3 to write ordered pairs for the starting salaries of teachers with 0, 3, 5, and 10 years of teaching experience.  

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**A class officer will buy picture frames as favors for the prom. To ensure she has enough frames, she plans to buy frames for the 18 teacher chaperones plus 1.2 times the number of students who buy tickets to the prom.**

Select the best answer.

- Which rule represents the number of frames the class officer will buy?  
A  $y = 19.2 + x$   
B  $y = 19.2x$   
C  $y = 18x + 1.2$   
D  $y = 18 + 1.2x$
- How many picture frames will the class officer buy if 225 students buy tickets to the prom?  
F 244                      H 270  
G 252                      J 288
- Since both the number of students who buy tickets and the number of frames the class officer will buy cannot be negative, which quadrant will the ordered pairs that satisfy the rule in problem 5 lie in?  
A Quadrant I              C Quadrant III  
B Quadrant II             D Quadrant IV
- If the class officer generates and graphs ordered pairs for the rule in problem 5, which statement would be true?  
F The points would form a line.  
G The points would form a U-shape.  
H The points would form a V-shape.  
J There will be no pattern.