

44. **TAKS REASONING** Two students have a business selling handmade scarves. The scarves come in four different styles: plain, with the class year, with the school name, and with the school mascot. The costs of making each style of scarf are \$10, \$15, \$20, and \$20, respectively. The prices of each style of scarf are \$15, \$20, \$25, and \$30, respectively.
- Write a 4×1 matrix C that gives the cost of making each style of scarf and a 4×1 matrix P that gives the price of each style of scarf.
 - The sales for the first three years of the business are shown below.

Year 1: 0 plain, 20 class year, 100 school name, 0 school mascot

Year 2: 10 plain, 100 class year, 50 school name, 30 school mascot

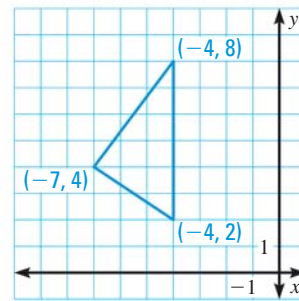
Year 3: 20 plain, 300 class year, 100 school name, 50 school mascot

 Write a 3×4 matrix S that gives the sales for the first three years.
 - Find SC and SP . What do these matrices represent?
 - Find $SP - SC$. What does this matrix represent?

45. **CHALLENGE** Matrix A is a 90° rotational matrix. Matrix B contains the coordinates of the vertices of the triangle shown in the graph.

$$A = \begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix} \quad B = \begin{bmatrix} -7 & -4 & -4 \\ 4 & 8 & 2 \end{bmatrix}$$

- Find AB . Draw the triangle whose vertices are given by AB .
- Find the 180° and 270° rotations of the original triangle by using repeated multiplication of the 90° rotational matrix. What are the coordinates of the vertices of the rotated triangles?

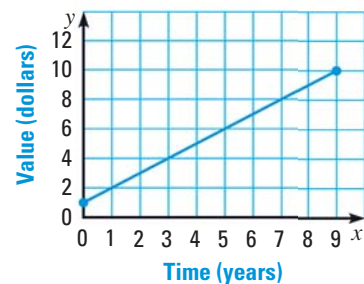


MIXED REVIEW FOR TAKS **TAKS PRACTICE** at classzone.com

REVIEW

Lesson 2.2;
TAKS Workbook

46. **TAKS PRACTICE** The graph shows the value of a comic book over a period of 9 years. What is a reasonable conclusion about the value of the comic book during the time shown on the graph? **TAKS Obj. 2**
- It appreciated \$2 every year.
 - It appreciated \$3 every 2 years.
 - Its value at 5 years was twice its value at 2 years.
 - Its value at 7 years was half its value at 3 years.



REVIEW

TAKS Preparation
p. 902;
TAKS Workbook

47. **TAKS PRACTICE** Use the information in the diagram. What is the distance x across the river? **TAKS Obj. 8**
- 10 m
 - 22 m
 - 12 m
 - 30 m

