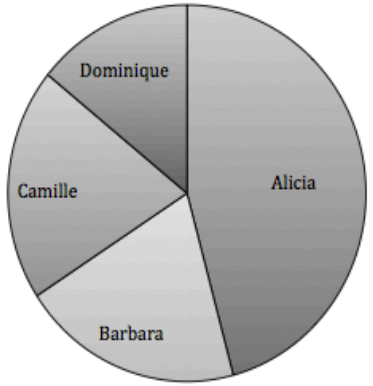
Ch. 7 Test Extra Credit
3 points per section

Circle Graphs

For problems 1 through 3 use the circle graph at right. The graph shows the results of the 1200 votes for prom queen.



1. Who won the election?

2. Did the person who won the election get more than half of the votes?

3. Approximately how many votes did Camille receive?

4. Of the milk consumed in the United States, 30% is whole, 50% is low fat, and 20% is skim. Draw a circle graph to show this data.

5. On an average weekday, Sam's time is spent as follows: sleep 8 hours, school 6 hours, entertainment 2 hours, homework 3 hours, meals 1 hour, and job 4 hours. Draw a circle graph to show this data.

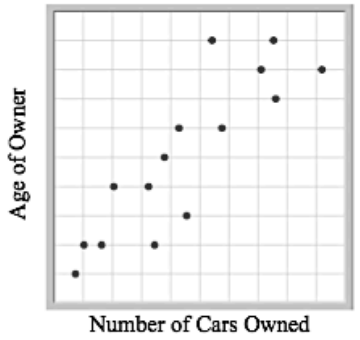
6. Records from a pizza parlor show the most popular one-item pizzas are: pepperoni 42%, sausage 25%, mushroom 10%, olive 9% and the rest were others. Draw a circle graph to show this data.

7. To pay for a 200 billion dollar state budget, the following monies were collected: income taxes 90 billion dollars, sales taxes 74 billion dollars, business taxes 20 billion dollars, and the rest were from miscellaneous sources. Draw a circle graph to show this data.

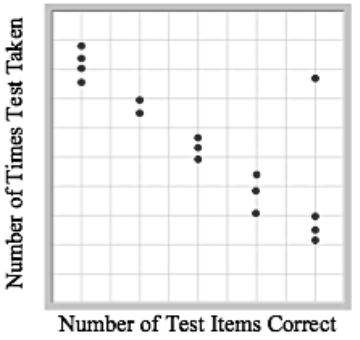
Scatter Plots

In problems 1 through 4 describe (if they exist), the form, direction, strength, and outliers of the scatterplot.

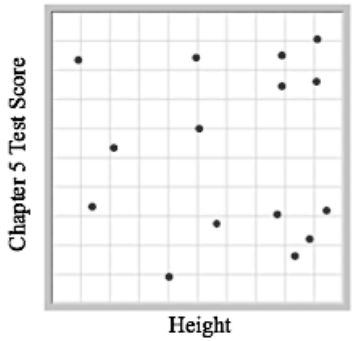
1.



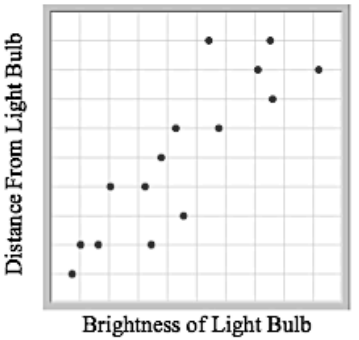
2.



3.



4.



6. Ranger Scott is responsible for monitoring the population of the elusive robins in McNeil State Park. He would like to find a relationship between the elm trees (their preferred nesting site) and the number of robins in the park. He randomly selects 7 different areas in the park and painstakingly counts the elms and robins in each area.

Elms	8	13	4	5	10	9	4
Robins	5	9	3	5	7	7	5

a. Make a scatterplot on graph paper and describe the association.

b. Sketch the line of best fit on your scatterplot. Find the equation of the line of best fit.

c. Based on the equation, how many robins should Ranger Scott expect to find in an area with 6 elm trees?

Transformations

For the following problems, refer to the figures below:

Figure A

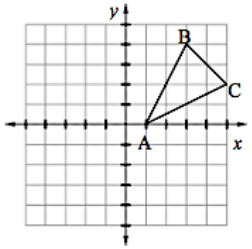


Figure B

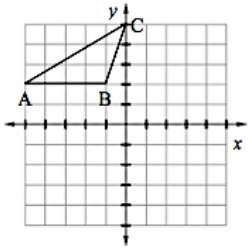
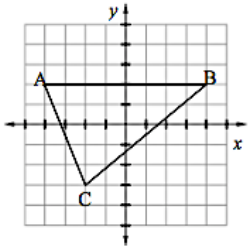


Figure C



State the new coordinates after each transformation.

5. Slide figure A left 2 units and down 3 units.

6. Slide figure B right 3 units and down 5 units.

7. Slide figure C left 1 unit and up 2 units.

8. Flip figure A across the *x*-axis.

9. Flip figure B across the *x*-axis.

10. Flip figure C across the *x*-axis.

11. Flip figure A across the *y*-axis.

12. Flip figure B across the *y*-axis.

13. Flip figure C across the *y*-axis.

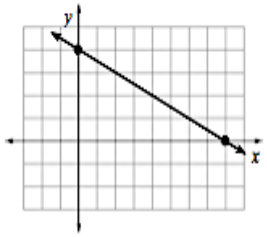
Slope

Write the slope of the line containing each pair of points.

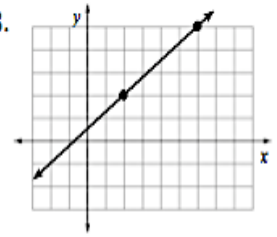
1. (3, 4) and (5, 7)
2. (5, 2) and (9, 4)
3. (1, –3) and (–4, 7)
4. (–2, 1) and (2, –2)
5. (–2, 3) and (4, 3)
6. (32, 12) and (12, 20)

Determine the slope of each line using the *highlighted points*.

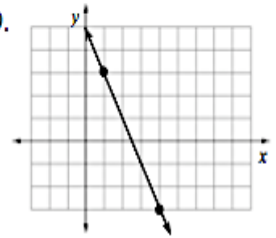
7.



8.



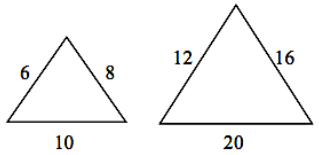
9.



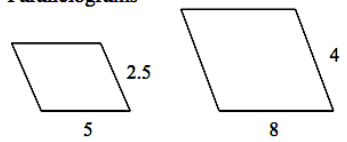
Similar Figures

Determine if the figures are similar. If so, state the scale factor of the first to the second.

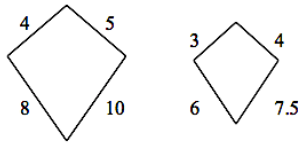
1.



2. Parallelograms

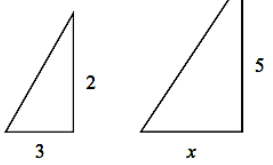


3. Kites



Determine the scale factor for each pair of similar figures. Use the scale factor to find the side labeled with the variable.

4.



5.