9.1
Scatter Plots
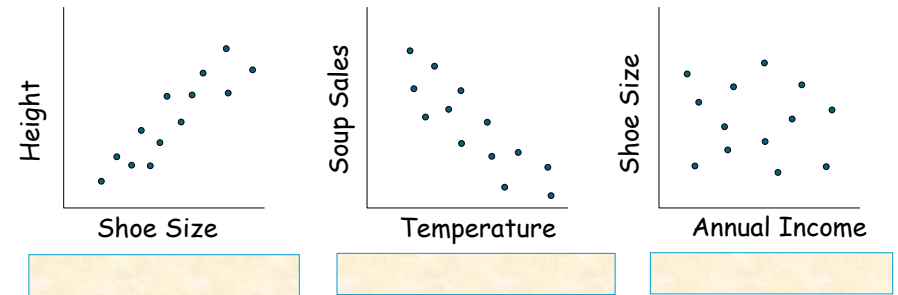
Scatter Plots

Scatter plots are used to show whether there is a
_____ between _____ sets of data. The
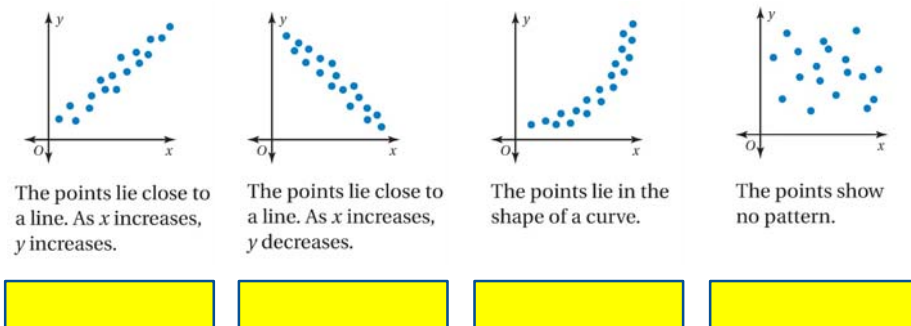relationship between the data can be described as either:

A positive relationship. As one quantity _____ so does the other.

A negative relationship. As one quantity _____ the other _____.

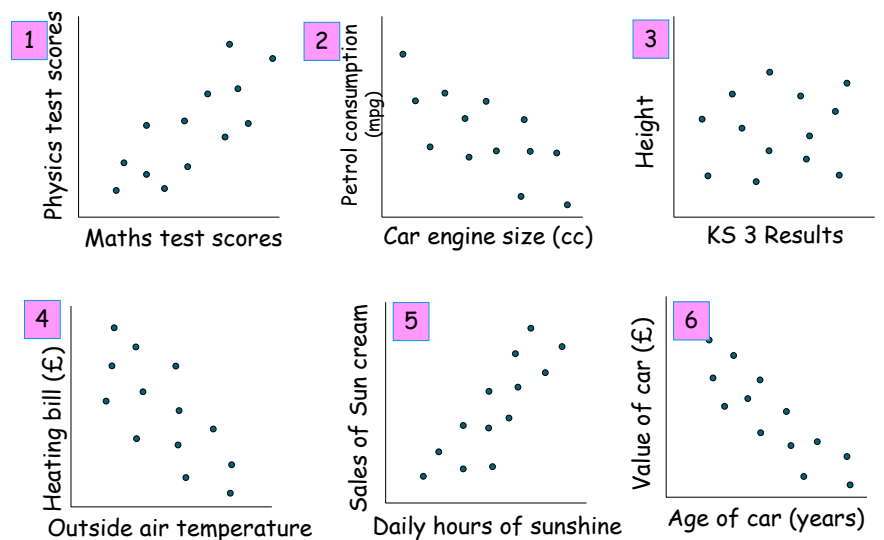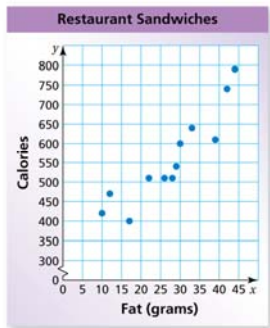No relationship. Both quantities vary with _____ relationship.

| Height vs Shoe Size | Soup Sales vs Temperature | Shoe Size vs Annual Income |

Kinds of Scatter Plots

The points lie close to a line. As x increases, y increases.

The points lie close to a line. As x increases, y decreases.

The points lie in the shape of a curve.

The points show no pattern.

State the type of correlation for the scatter graphs below

1. Physics test scores vs Maths test scores

2. Petrol consumption (mpg) vs Car engine size (cc)

3. Height vs KS 3 Results

4. Heating bill (£) vs Outside air temperature

5. Sales of Sun cream vs Daily hours of sunshine

6. Value of car (£) vs Age of car (years)

Restaurant Sandwiches

Calories (y-axis: 0, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800)

Fat (grams) (x-axis: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45)

The scatter plot at the left shows the amounts of fat (in grams) and the numbers of calories in 12 restaurant sandwiches.

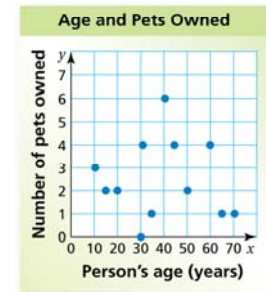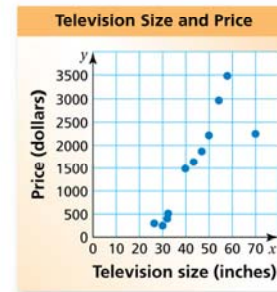a. How many calories are in the sandwich that contains 17 grams of fat?

b. How many grams of fat are in the sandwich that contains 600 calories?

c. What tends to happen to the number of calories as the number of grams of fat increases?

Describe the relationship between the data. Identify any outliers, gaps, or clusters.

a. television size and price   b. age and number of pets owned

Television Size and Price

Price (dollars) (y-axis: 0, 500, 1000, 1500, 2000, 2500, 3000, 3500)

Television size (inches) (x-axis: 0, 10, 20, 30, 40, 50, 60, 70)

Age and Pets Owned

Number of pets owned (y-axis: 0, 1, 2, 3, 4, 5, 6, 7)

Person's age (years) (x-axis: 0, 10, 20, 30, 40, 50, 60, 70)

Describe the relationship between the data. Identify any outliers, gaps, or clusters.

Heating cost (dollars) (y-axis: 0, 100, 200, 300, 400, 500, 600, 700)

Month (x-axis: 0, 1, 2, 3, 4, 5, 6, 7)