

Interpolate

Hint: You are interpolating when the value you are finding is somewhere between the first point and the last point.

When you interpolate, you are making a prediction _____ the data.

These predictions are usually _____.

Extrapolate

You are extrapolating when the value you are finding is before the first point or after the last point. This means you may need to extend the line.

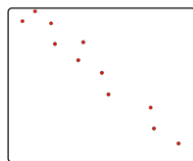
When you extrapolate, you are making a prediction _____ the data.

It often requires you to _____ the line. These predictions are less reliable.

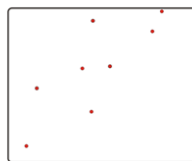
Line of best fit practice

Describing Scatter Plots and Lines of Best Fit

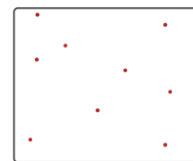
Draw a line of best fit for each of the scatter plots that show a linear relationship below. Write two or three key words to describe each relation on the line below the scatter plot. (*rises upward to the right, falls downward to the right, no relationship, strong, weak, linear, non-linear*)



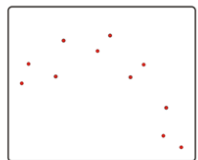
a) _____



b) _____



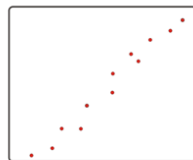
c) _____



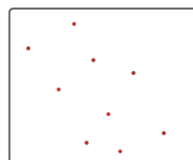
d) _____



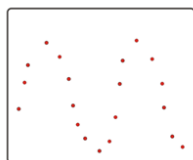
e) _____



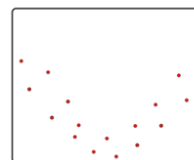
f) _____



g) _____

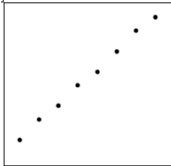
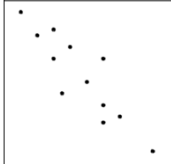



h) _____



i) _____

Correlation:

	<p>A scatter plot shows a _____ correlation when the pattern rises up to the right.</p> <p><i>This means that the two quantities increase together.</i></p>
	<p>A scatter plot shows a _____ correlation when the pattern falls down to the right.</p> <p><i>This means that as one quantity increases the other decreases.</i></p>
	<p>A scatter plot shows _____ correlation when no pattern appears.</p> <p><i>Hint: If the points are roughly enclosed by a circle, then there is no correlation.</i></p>

Correlation can either be strong, weak or no correlation at all.

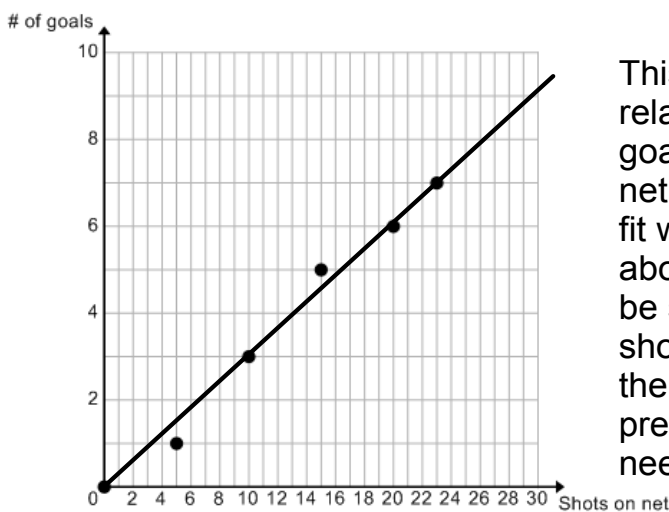
Hint: To visualize this, enclose the plotted points in an oval. If the oval is thin, then the correlation is strong. If the oval is fat, then the correlation is weak.

If the points nearly form a line, then the correlation is _____.

If the points are dispersed more widely, but still form a rough line, then the correlation is _____.

Sample response

A line of best fit can be used in a scatter plot to make predictions on data that displays a trend.



This graph shows the relationship between the # of goals and the # of shots on net. By drawing a line of best fit we can make a prediction about how many goals might be scored based on the # of shots on net. We can also do the opposite, make a prediction about the # of shots needed to get a certain score.

According to this graph to get 9 goals I would need to make 30 shots on net.