

A scatter plot is:

- **linear** if the points lie along or close to a *straight* line.
- **non-linear** if the points lie along or close to a *curve*.

A scatter plot has:

- **positive correlation** when the trend is increasing towards the right.
- **negative correlation** when the trend is decreasing towards the right.

The correlation is:

- **very strong** if the points follow a line or curve perfectly.
- **strong** if the points nearly follow a line or curve.
- **weak** if the points are dispersed more widely, but still show a recognizable trend.
- **no correlation** when points are so scattered that no trend is discernable.

Line of Best Fit

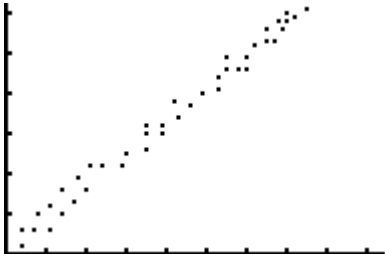
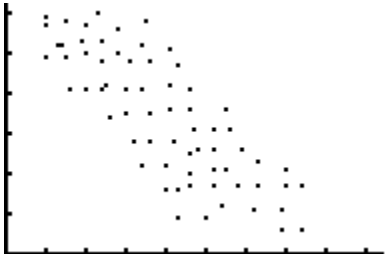
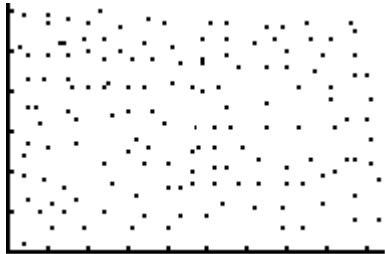
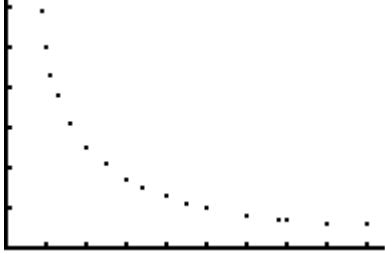
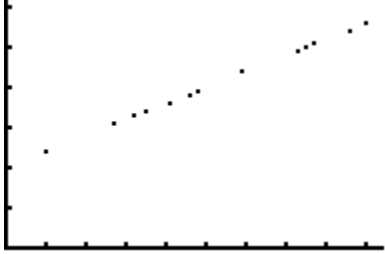
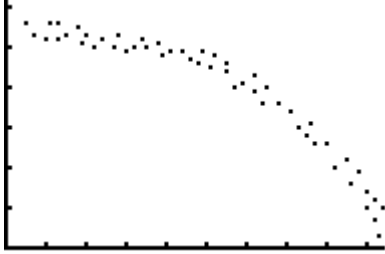
- a (straight) line which follows the trend of linear data most closely so that an equal number of data points lie on either side of the line.

Curve of Best Fit

- a (smooth) curve which follows the trend of non-linear data most closely so that an equal number of data points lie on either side of the line.

Exercise — In each graph below:

- ① Circle the correct words describing the type of correlation shown. If you circle "none", then that is the only word that need be circled for that graph.
- ② For each graph (unless it has no correlation), draw the line or curve of best fit.

<p>1.</p>  <p>The correlation is... very strong / strong / weak / none linear / non-linear positive / negative</p>	<p>2.</p>  <p>The correlation is... very strong / strong / weak / none linear / non-linear positive / negative</p>	<p>3.</p>  <p>The correlation is... very strong / strong / weak / none linear / non-linear neither positive / negative neither</p>
<p>4.</p>  <p>The correlation is... very strong / strong / weak / none linear / non-linear positive / negative</p>	<p>5.</p>  <p>The correlation is... very strong / strong / weak / none linear / non-linear positive / negative</p>	<p>6.</p>  <p>The correlation is... very strong / strong / weak / none linear / non-linear positive / negative</p>