Worksheet: Correlation

1. Two lists of data $x_1, \ldots, x_n$ and $y_1, \ldots, y_n$ have the following properties.

$$\text{mean}_x = 10 \quad \text{sd}_x = 2$$
$$\text{mean}_y = 3 \quad \text{sd}_y = 4 \quad r = 0.5$$

a) Find the equation for the regression line and make a sketch.

b) Predict the y value if $x = 8$. If $x = 14$?

2. For the given data, calculate mean_x, sd_x, mean_y, sd_y and r then find the equation for the regression line.

x	y
1	3
2	1
6	-1