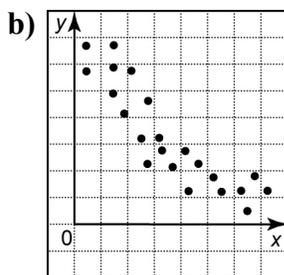
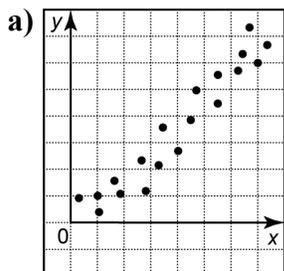
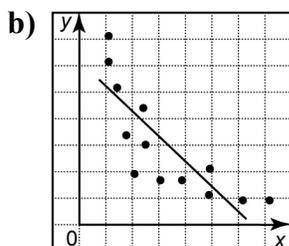
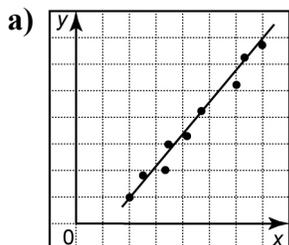


Section 4.1 Practice Master

1. Which scatter plot(s) could be modelled using a curve instead of a line of best fit? Explain.



2. State whether each line of best fit is a good model for the data. Justify your answer.



3. Are the relations in question 2 linear or non-linear? Explain.

4. a) Complete the table of values for the relation between the area of a circle and its diameter. Then, make a scatter plot of the data.

Diameter (cm)	$A = \pi r^2$ (cm ²)
1	
2	
3	
4	
5	
6	

- b) Describe the relation.
- c) Draw a curve of best fit for the data.
- d) Use your model to predict the area for a diameter of 2.5 cm.
- e) Use your model to predict the area for a diameter of 8 cm.

5. a) Complete the table for the surface area of a cube.

Side Length, s (cm)	Surface Area, $SA = 6s^2$ (cm ²)
1	
2	
3	
4	
5	
6	
7	
8	

- b) Make a scatter plot of the data.
- c) Describe the relation.
- d) Draw a curve of best fit for the data.
- e) Use your model to predict the surface area for a side length of 7.5 cm.
- f) Explain why the graph is non-linear.