

NAME \_\_\_\_\_

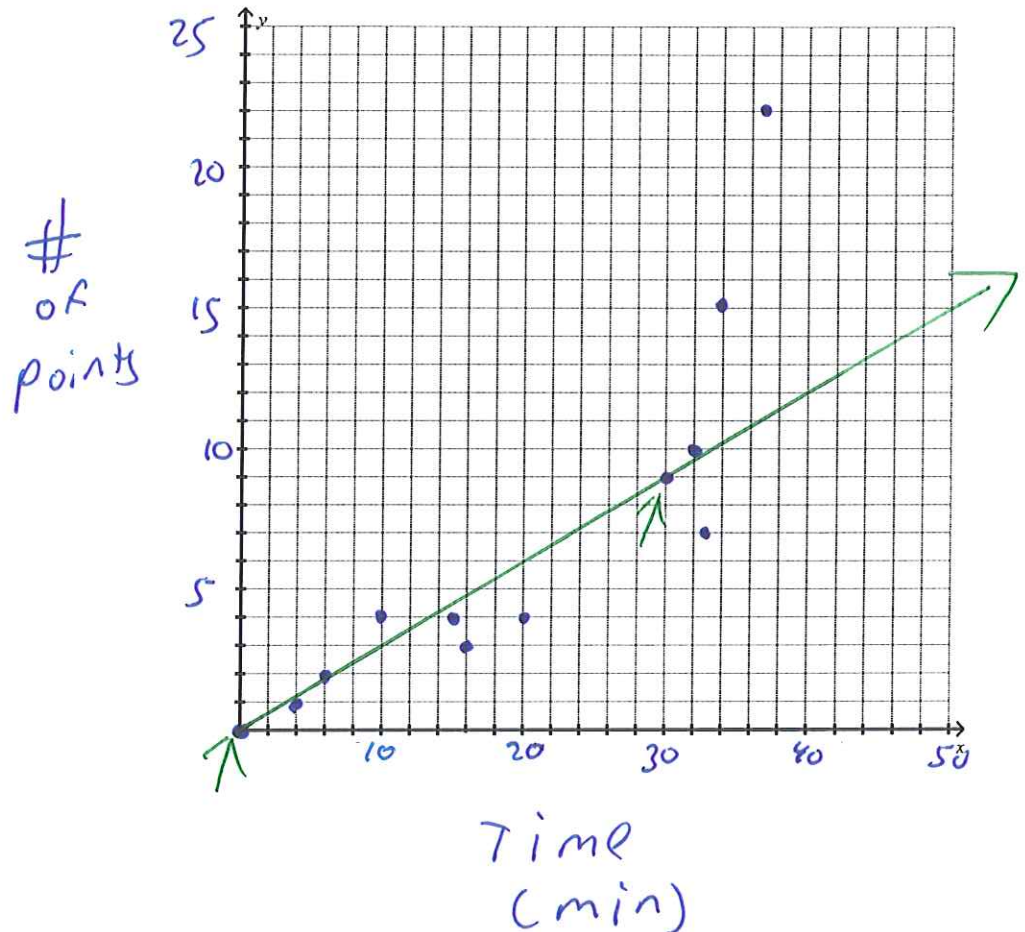
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# More Practice – Scatter Plots

The table below represents the relationship between the number of minutes a player played in a basketball game and the number of points that they scored.

1. Make a scatter plot and label each axis.
2. Label the scale on the x-axis going by two and the y-axis going by one.
3. Draw the line of best fit. Have about the same number of points above and below it.
4. Create an equation for your line of best fit. Show your work for full credit.

X Time	Y # of points
37	22
0	0
10	4
6	2
32	10
15	4
34	15
20	4
4	1
33	8
30	9
16	3

**Slope:**

$$(0,0) \quad (30,9)$$

$$\frac{9-0}{30-0} = \frac{9}{30} = \frac{3}{10}$$

**y-intercept:**

$$0 = \frac{3}{10} \cdot 0 + b$$

$$0 = 0 + b$$

$$b = 0$$

**Equation:**

$$y = \frac{3}{10}x$$

1. Distinguish the meaning of the slope in this context.

$$m = \frac{3}{10} = .3$$

3 pts scored for every 10 minutes of playing time.

or .3 pts scored for every 1 minute of playing time.

2. Distinguish the meaning of the y-intercept in this context.

$$b = (0)$$

zero points scored with zero minutes of playing time.

3. Use your equation of your line of best fit to predict how many points a player would make if they had 60 minutes of playing time? Show your work for full credit!

$$y = \frac{3}{10} x$$

$$y = \frac{3}{10} \cdot 60$$

$$y = 18$$

18 pts scored for playing 60 minutes.

4. Use your equation of your line of best fit to predict the minutes a player would have played if they had 25 points? Show your work for full credit!

$$y = \frac{3}{10} x$$

$$\frac{10}{3} \cdot 25 = \frac{10}{3} \cdot \frac{3}{10} \cdot x$$

$$\frac{250}{3} = x$$

$$x \approx 83.3 \text{ min}$$

B-ball games are usually not this long.