**Linear Regression Pre-Quiz**

*Instructions*: Answer all questions. You will use all these skills during the activity.

1. Define “line of best fit”:
2. Draw a line of best fit for the following scatter plots:



1. Find the equation of the line through the following points:
	1. (-1, -10) and (3, 2)
	2. (2, 5) and (-4, 2)
2. A ball is rolled down a hallway and its position is recorded at five different times. Use the data in the table below to predict the location of the ball at 12 seconds. Answer:

|  |  |
| --- | --- |
| **Time** (seconds) | **Position** (meters) |
| 1 | 9 |
| 2 | 12 |
| 4 | 17 |
| 6 | 21 |
| 8 | 26 |

1. Calculate the average speed of the ball in question 4. Show your work.
2. A car accelerates from a standstill to 60 m/s in 10 seconds. What is the acceleration?
3. A car accelerates from 25 km/hr to 55 km/hr in 30 seconds. What is its acceleration?