

BC Numeracy 10 Exam Practice – Graphing Data

For each situation below:

1. Plot the data on a graph.
2. Draw a reasonable line of best fit. (It does **not** need to touch every point but should pass through at least 2 points.)

Scenario 9

Wake-Up Time vs. Minutes Late for School

A student keeps blaming being late for school on their alarm clock, but their teacher disagrees. They record what time they wake up and how many minutes late they arrive. They hope the data will help them prove their point — or show that **getting up earlier really does matter**.

Wake Time (AM)	Minutes Late
5:50	1
6:00	3
6:05	6
6:10	8
6:15	11
6:20	14
6:25	17
6:30	19
6:35	22
6:40	25
6:45	26
6:50	28
6:55	31
7:00	34

Scenario 10

Car Speed vs. Time Required to Reach Destination

A driver wants to know how much time they would save by driving faster when commuting to work. They test driving at different speeds early on Sunday mornings when traffic is light. Weather, stoplights, and road conditions create variation in the results — so they want to know **whether speed alone reliably predicts commute time**.

Speed (km/h)	Time (min)
20	57
25	52
30	49
35	45
40	43
45	41
50	38
55	36
60	34
65	33
70	31
75	30
80	29
85	27

Scenario 9 — Wake-Up Time (Wake-Up Time → Minutes Late)

- a) If the student wakes up at **6:25 AM**, predict how many minutes late they will be.
- b) If the student arrived **10 minutes late**, estimate when they woke up.

Scenario 10 — Driving Speed (Speed → Travel Time)

- a) If the driver travels at **55 km/h**, estimate how long the commute will take.
- b) If the trip took **40 minutes**, estimate the speed they were traveling.

For each situation below:

1. Plot the data on a graph.
2. Draw a reasonable line of best fit. (It does **not** need to touch every point but should pass through at least 2 points.)



Scenario 11

Energy Drink Sales vs. Hours of Video Gaming

A gamer wants to know whether their energy drink intake affects how long they end up playing online at night. They log how many cans they drink before or during gaming, and how many hours they end up playing. Weekends, competitions, and team events add variation, so the relationship isn't perfect.

Cans Drank	Gaming Time (hrs)
0	1.4
1	2.0
1	2.4
2	3.0
2	3.3
3	4.1
3	4.4
4	5.0
4	5.4
5	5.9
5	6.3
6	6.7
6	7.1
7	7.6



Scenario 12

Plant Growth vs. Hours of Sunlight

A student grows bean plants for a science fair project. They give each plant a different amount of sunlight per day using lamps and measure how tall each plant becomes after five weeks. Some plants grow unexpectedly fast or slow due to watering and soil variation, so the pattern isn't perfect.

Sunlight (hrs/day)	Height (cm)
2	11
3	15
4	18
5	23
6	28
7	32
8	36
9	41
10	44
11	47
12	50
13	53
14	56
15	60



Scenario 11 — Energy Drinks and Gaming (Energy Drinks → Gaming Time)

- a) If the gamer drinks **4 cans**, estimate how many hours they will play.
- b) If the gamer played for **6 hours**, estimate how many energy drinks they likely consumed.



Scenario 12 — Plant Growth (Sunlight → Height)

- a) If a plant receives **9 hours of sunlight**, estimate its final height.
- b) If a plant reached a height of **50 cm**, estimate how many hours of sunlight it received.