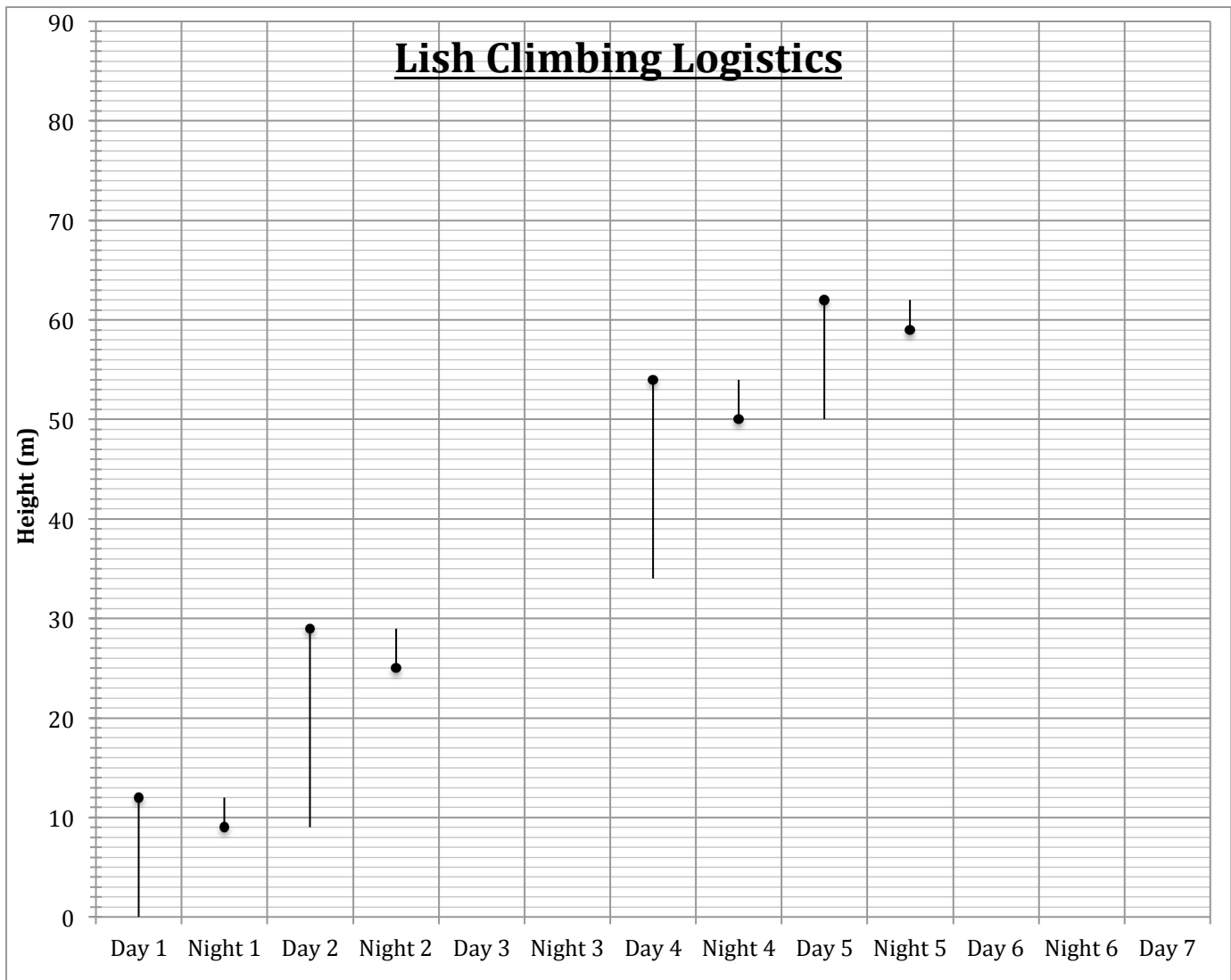


Libly Side Quest –Climbing the Waterfall!

The Lish are a type of fish that migrates long distances in order to spawn. One of the biggest challenges they have to face is climbing the waterfall in the Libly territory. They do this not by swimming up the waterfall, but instead by using their mouths to slowly make their way up the cliff behind the waterfall. This type of behavior is similar to the Nopoli Goby of Hawaii, a type of fish that also climbs waterfalls using the suction of their mouths.

Task: The Lish climb in a weird way...

On odd days, they climb 12 m upward.
On odd nights, they fall down 3 m while sleeping.
On even days, they climb 20 m upward.
On even nights, they fall down 4 m while sleeping.



Part I – Reading and Interpreting Data: The chart above shows a series of lines that indicate how far the Lish traveled. The dots at the end of the lines indicate where the Lish ended up on that particular day or night. For example, on Day 1, the Lish ended up 12 m above the ground. On Night 1, the Lish fell 3 m and ended up only 9 m above the ground.

- 1) How far above the ground was the Lish at the end of Night 4? (1)
- 2) During the course of Day 2 and Night 2, how far did the Lish travel total? (1)
- 3) During the course of Day 2 and Night 2, how much higher above the ground did the Lish go? (1)

Part II – Plotting data: The chart on the front page is missing some data. Day 3, Night 3, Day 6, Night 6, and Day 7 are all missing.

- 4) For Day 3, Night 3, Day 6, and Night 6, use the climbing patterns to draw lines that plot out the distance traveled. Then place a dot indicating where the Lish ended up during that time. (4)
- 5) Day 7 is special... On Day 7, the Lish only traveled for half of the day before they reached the top of the falls. (3)
 - a. Determine how far the Lish traveled on Day 7.
 - b. Draw a line showing how far the Lish traveled on Day 7. Make sure you place a dot at the end to indicate where the top of the falls is.
 - c. Figure out how much distance the Lish traveled throughout its entire climb.