

1. John and Ali play on the same soccer team. John takes 15 shots in a tournament and scores three goals. Ali takes 25 shots and scores six goals.

Who has the higher scoring rate?

Justify your answer.



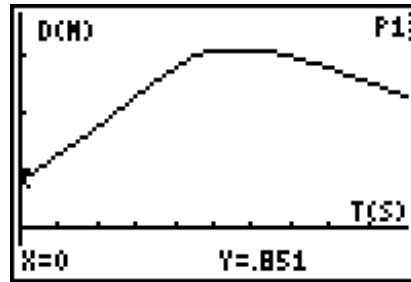
2. Hugh collects the following data in science class during an experiment in which he is heating a liquid.

Time (s)	Temperature ($^{\circ}\text{C}$)
0	15
30	20
60	25
90	30
120	35
150	40

Determine whether the relationship between temperature and time is linear or non-linear. Justify your answer.

3. A toy robot walks in front of a motion detector.
The graph below shows the distance the robot is from the motion detector, in metres, over a period of 10 s.

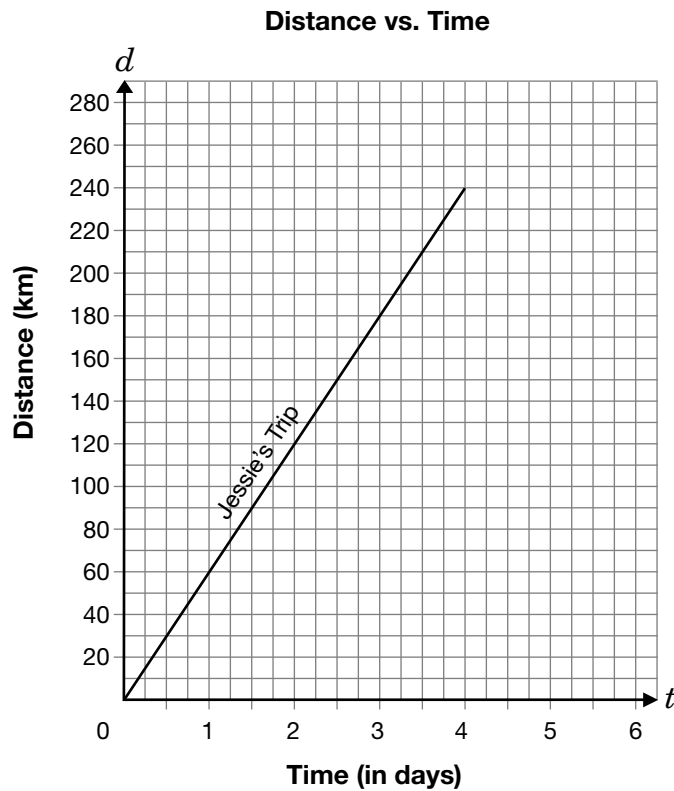
Describe the robot's walk.



Hint:
Talk about speed, direction, distance from the motion detector and time.

4. Jessie and Juan go on a 240 km bike trip.

The graph represents the distance Jessie travels, d , in kilometres, and the time it takes her, t , in days.

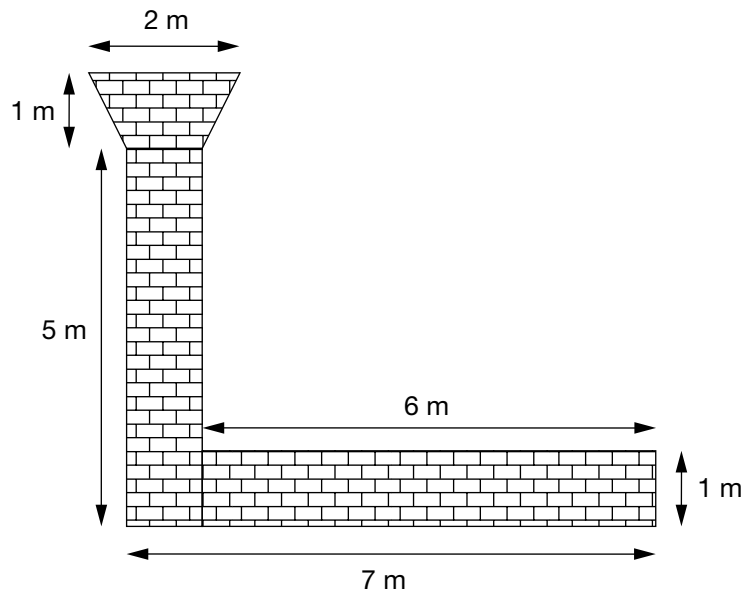


Juan travels an average of 20 km less per day than Jessie.

How many days more does it take Juan to complete the 240 km trip?

Show your work.

5. Dominique is helping her uncle install paving stones on the pathway in front of her house. This is the plan for the pathway.



Determine the total area of the pathway. Show your work.