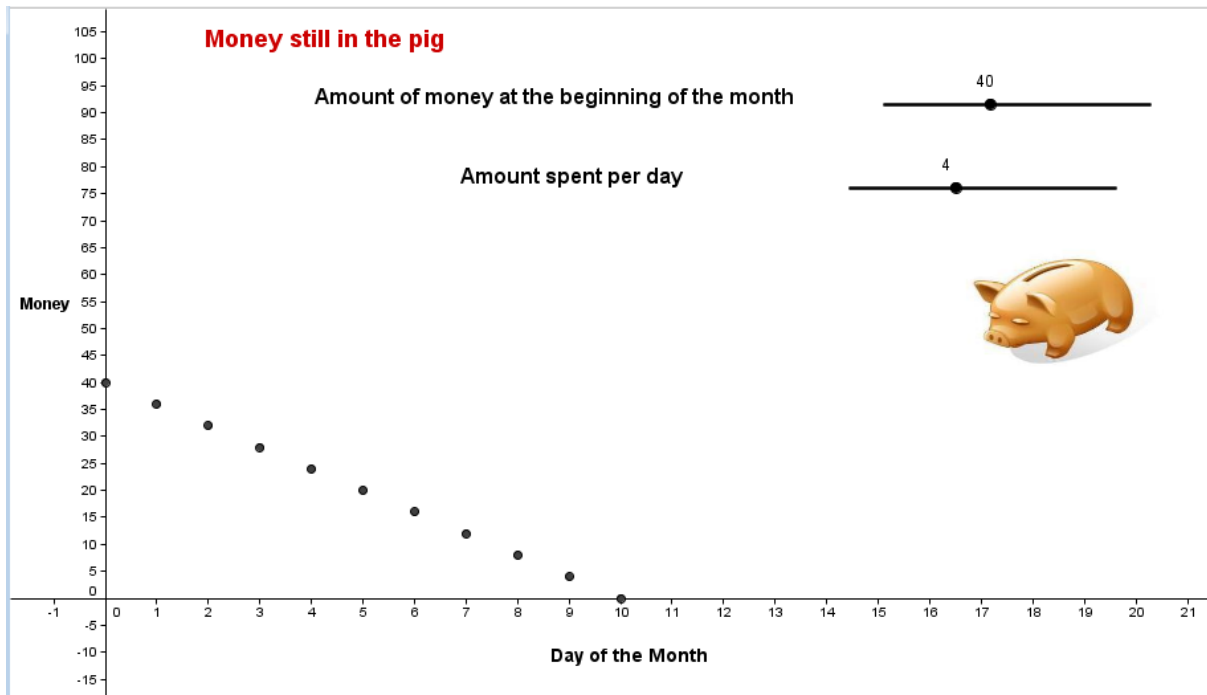


Student Activity: To investigate a spending pattern

Use in connection with the interactive file, 'Piggy Bank', on the Student's CD.



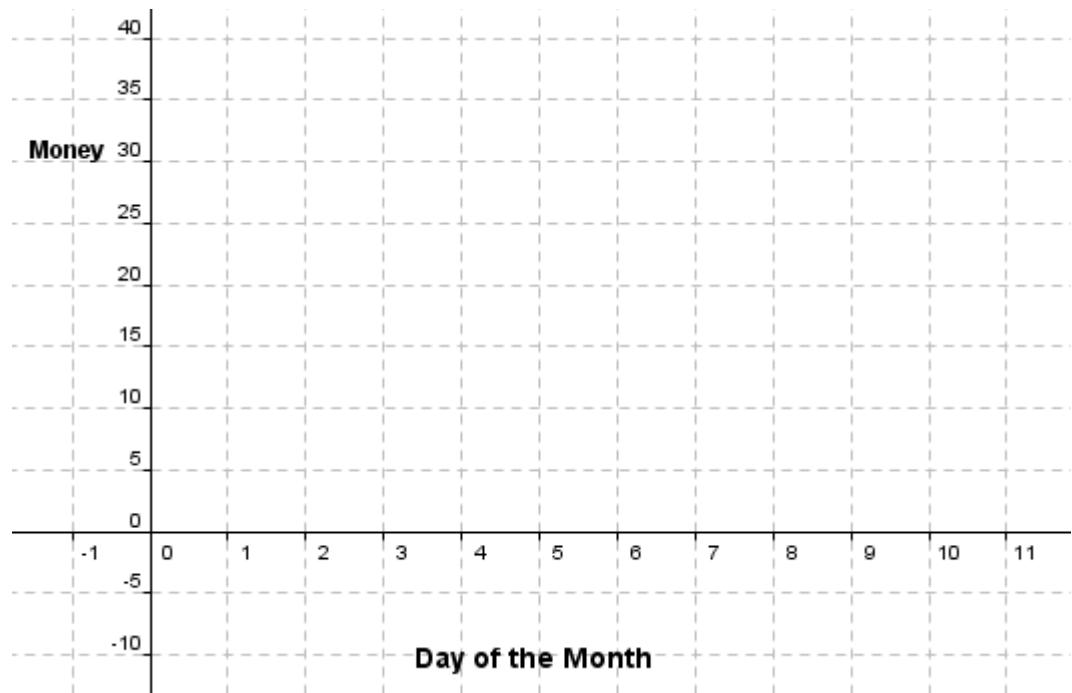
1.

- a. Judith has €40 in her piggy bank and every day after that she spends €4.

Complete the following table:

Day	Money left in the Piggy Bank
0	40
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

- b. Represent the information contained in the table in part a in the graph below, taking day 0 to be the start of the month:



- c. Assuming Judith has no other source of income, what happens after day 10?

- d. Why are dots used in the interactive file rather than a continuous line to represent the data?

- e. Is the rate of change of this graph positive or negative? i.e. is the graph increasing or decreasing? Explain your answer.

- f. Take any two points on the diagram and find the slope of the line that would pass through both these points. Repeat this for another set of points.

- g. How does the slope of the line between any two points relate to the story about the piggy bank at the start?

- h. Where on the graph does the starting amount appear? Explain your answer.

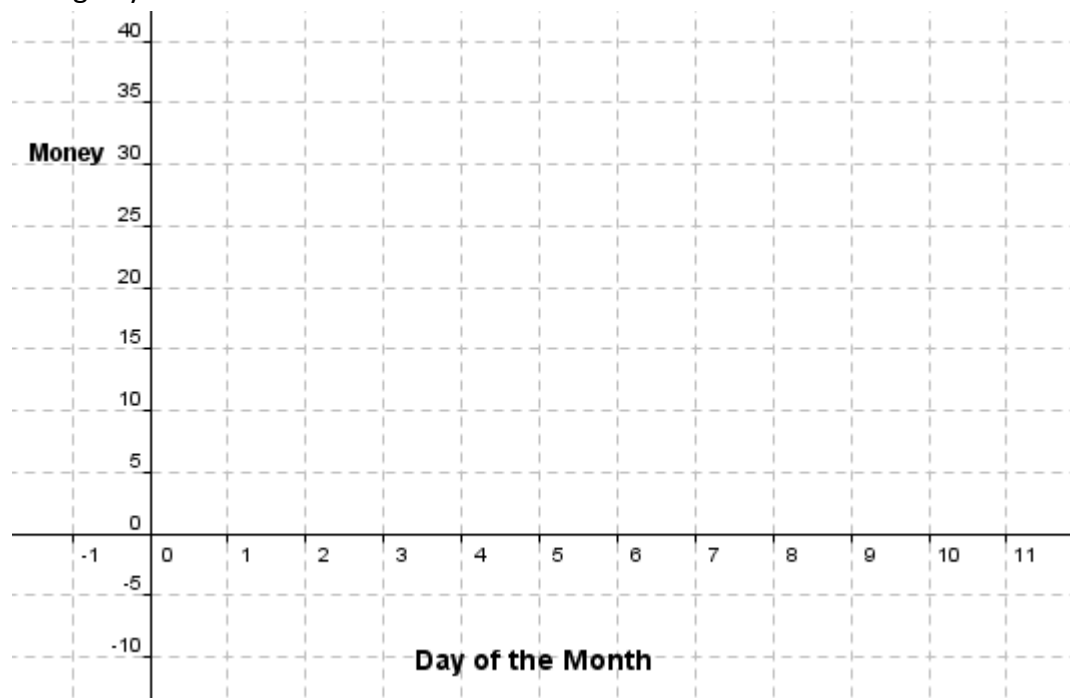
2.

- a. Peter has €25 in his piggy bank and every day after that he spends €3.

Complete the following table:

Day	Money left in the Piggy Bank
0	25
1	
2	
3	
4	
5	
6	
7	
8	

- b. Represent the information contained in the table in part **a** in the graph below taking day 0 to be the start of the month:.



- c. Assuming Peter has no other source of income, what happens after day 9?

- d. Why are dots more appropriate in the graph, rather than a continuous line to represent the data?

- e. Is the rate of change of this graph positive or negative? i.e. is the graph increasing or decreasing? Explain your answer.

- f. Take any two points on the diagram and find the slope of the line that would pass through both these points. Repeat for another set of points.

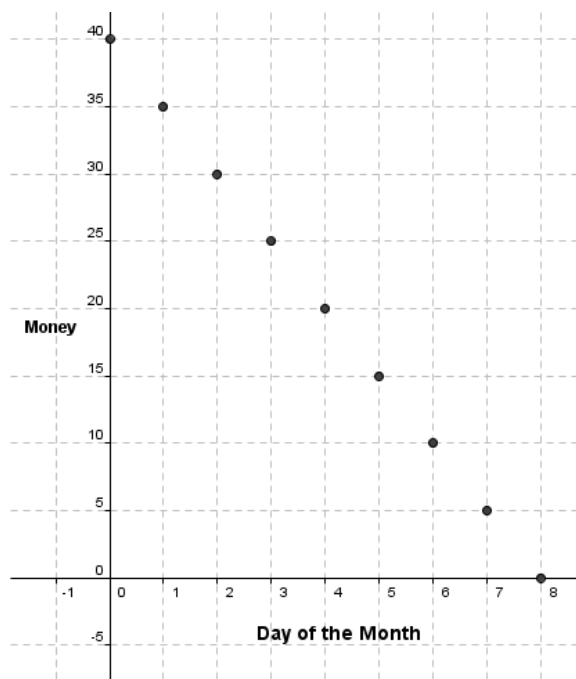
- g. How does the answer for the slope of the line between any two points relate to the story about the piggy bank at the start?

- h. Where on the graph does the starting amount appear? Explain your answer.

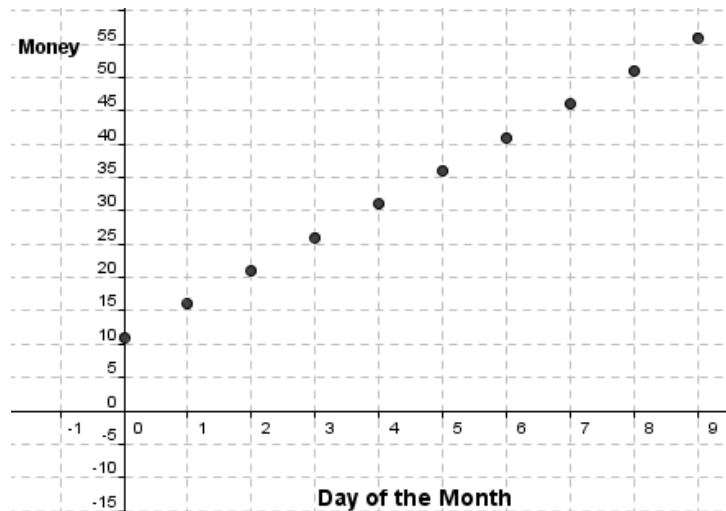
3. Assuming the diagram below represents a money box:

- a. How much money had this student at the beginning of the month (i.e at day 0)? Explain your answer.

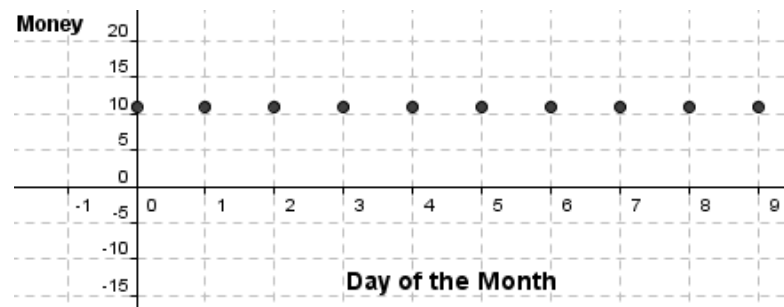
- b. How much money did this student spend per day? Explain your answer.



4. Assuming the graph below represents the money in of another student's piggy bank, can you explain what is happening to the money in this student's piggy bank starting at the beginning of the month?



5. Assuming the graph below represents the spending pattern of another student can you explain what is happening to the money in this student's piggy bank? Explain your answer.



6. What would you suggest happened on day 4 and day 9 to this student's money?

