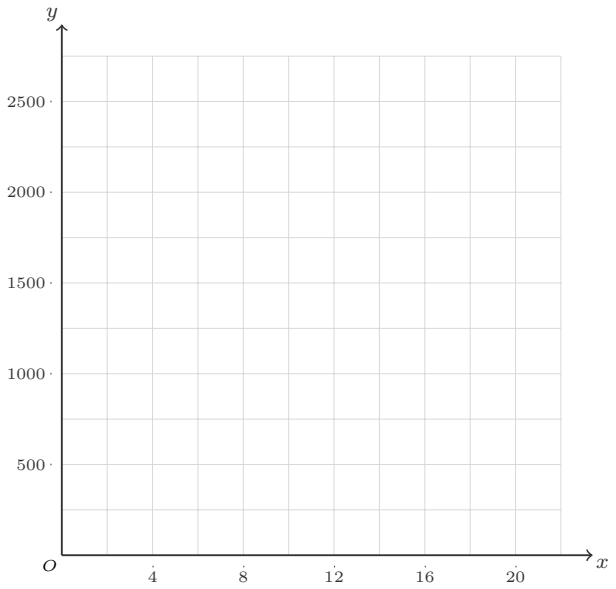
1 The grid shows the distance a walker is from home after x minutes. Read your answers from the graph.



(1 mark)

2 Plot these points and use them to answer the questions: $(0, 500)$, $(5, 1000)$, $(10, 1500)$, $(20, 2500)$.

(a) Plot the four points on the grid in question 1 (2)

(b) Find the rate of change, with its unit (1)

(c) Write down the initial value and say what it means (2)

(d) Write y as a function of x (1)

(6 marks)

3 A ball is dropped. The table shows how far it has fallen.

Time (x s)	1	2	3
Fallen (y m)	5	20	45

(a) Find the rate of change between 1 and 2 seconds (1)

(b) Find the rate of change between 2 and 3 seconds (1)

(c) Is this relationship linear? Explain your answer. (2)

(4 marks)

4 Two taxis are compared. Taxi A charges $y = 800x + 1000$ and taxi B charges $y = 500x + 3400$, in shillings for x kilometres.

(a) Find the cost of a 4 km journey with each (2)

(b) Find the cost of a 12 km journey with each (2)

(c) At what distance do the two cost the same? (2)

(d) Write down which taxi you would advise for a short journey, and why (2)

(8 marks)

5 A savings account is described by $y = 60x + c$, where x is months. After 4 months there is $\$390$ in the account.

(a) How much has been saved in those 4 months? (1)

(b) Find the value of c (1)

(c) Write the complete function (1)

(d) How long until there is $\$1{,}050$ in the account? (2)

(5 marks)