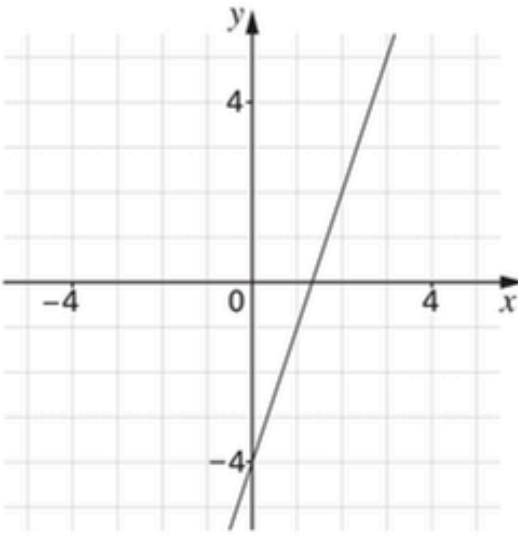
Graphs and Coordinates

Plotting points, reading coordinates and interpreting graphs connects algebra and geometry — a skill tested throughout KS3 and GCSE maths!

The graph shows the straight line with equation $y = 3x - 4$



(a) A point on the line $y = 3x - 4$ has an **x-coordinate of 50**

What is the y-coordinate of this point?

..... 1

(b) A point on the line $y = 3x - 4$ has a **y-coordinate of 50**

What is the x-coordinate of this point?

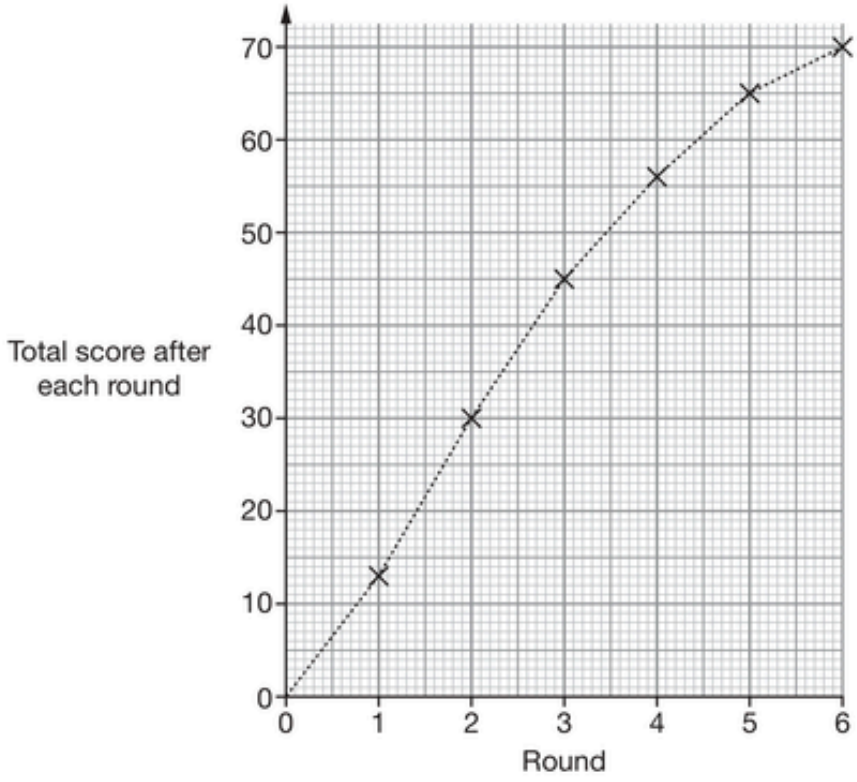
..... 1

KS3 Maths SATs, Tier 4-6, Paper 1 (2005) - Q24

A game has six rounds.

In each round of the game, the player gains points which are added to their total score.

(a) The graph shows Sue's total score after each round of her game.



How many points did Sue gain in **round 4**?

2 marks

(b) Derek plays the game.

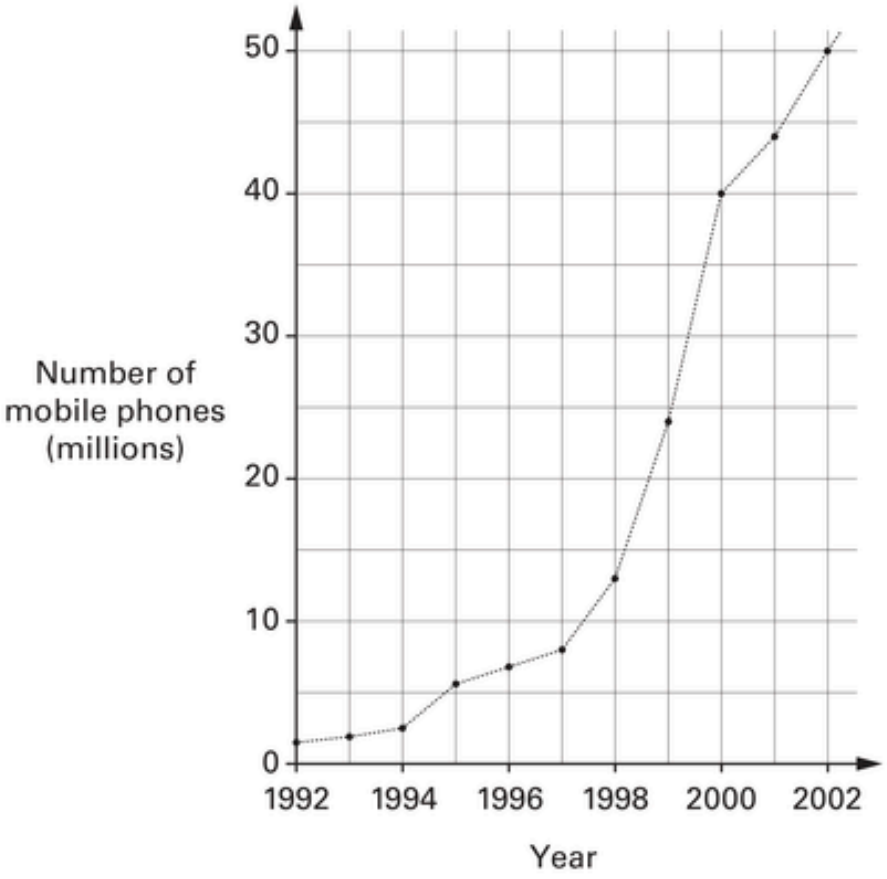
The graph of his total score after each round is a **straight line**.

What can you say about the number of points Derek gained in each round?

1 mark

Modern Tuition

A survey showed these results about the number of mobile phones used in the UK.



Use the graph to write the missing numbers below.

In **1992**, there were about ..... million mobile phones.

1 mark

Ten years later, there were about ..... million mobile phones.

1 mark

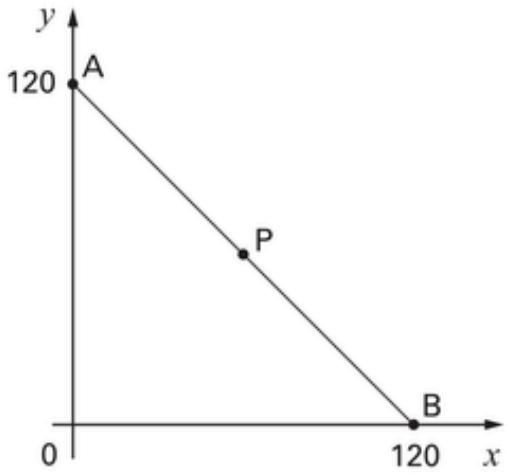
From **1998 to 1999**, the number of mobile phones

increased by about ..... million.

1 mark

Modern Tuition

(a) P is the **midpoint** of line AB.



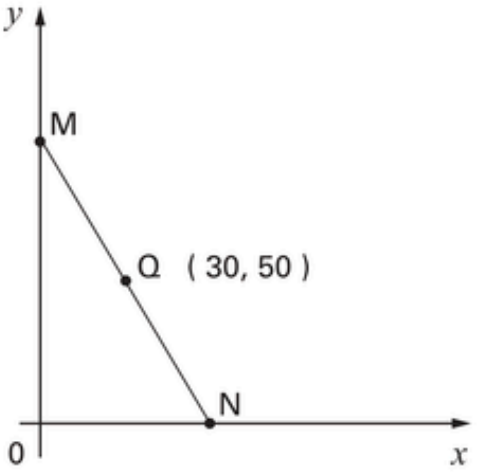
What are the coordinates of point **P**?

P is (..... , ...)

1 mark

(b) Q is the **midpoint** of line MN.

The coordinates of Q are (30, 50)



What are the coordinates of points **M** and **N**?

M is (..... , ...)

1 mark

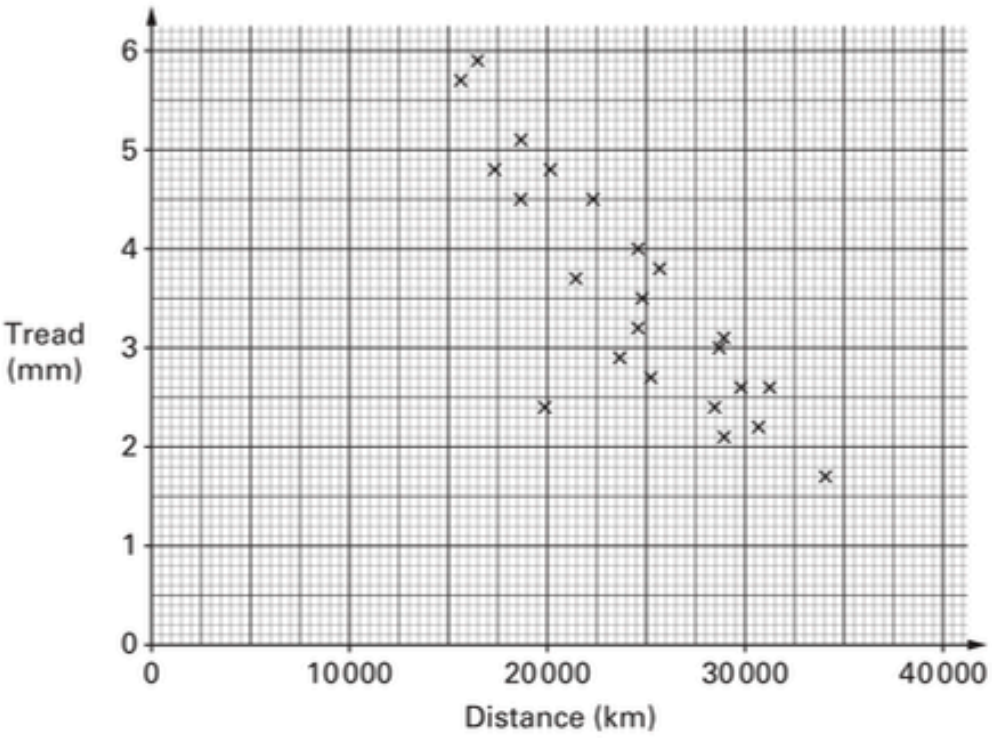
N is (..... , ...)

1 mark

Modern Tuition

Car tyres are checked for safety by measuring the tread.

The tread on a tyre and the distance travelled by that tyre were recorded for a sample of tyres. The scatter graph shows the results.



Tyres with a tread of **less than 1.6mm** are illegal.

Suppose the government changes this rule to **less than 2.5mm**.

(a) How many of these tyres would now be illegal?

..... 1 mark

(b) About **how many fewer kilometres** would you expect a tyre to last before it was illegal?

..... 1 mark

Modern Tuition