

NAME

Time:



Calculator Questions



- 1 V is directly proportional to c .
Given that $c = 0.04$ when $V = 12$, calculate the value of V when $c = 0.1$

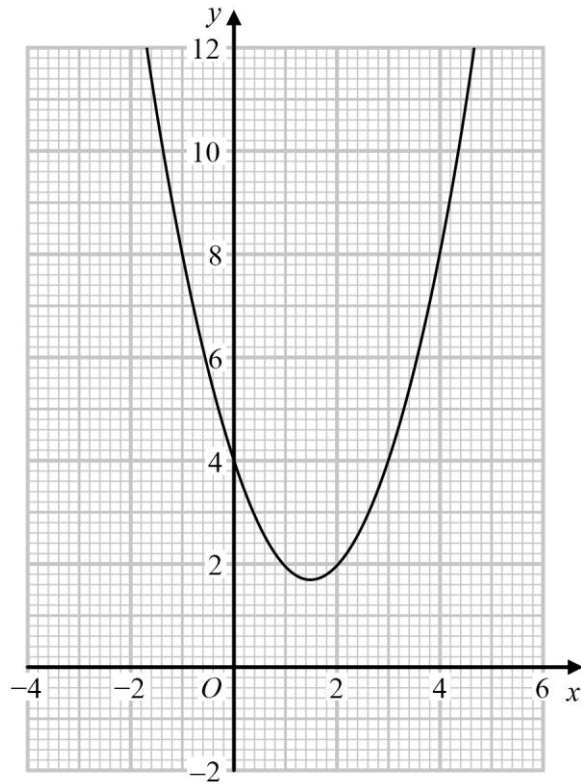
(3 marks)



- 3 p is inversely proportional to q^2 .
Given that $p = 24$ when $q = 16$, calculate a value of q when $p = 6$

(3 marks)

- 5 The curve is the graph of $y = x^2 - 3x + 4$



Calculate an estimate for the gradient of the graph at $x = 3$

(3 marks)



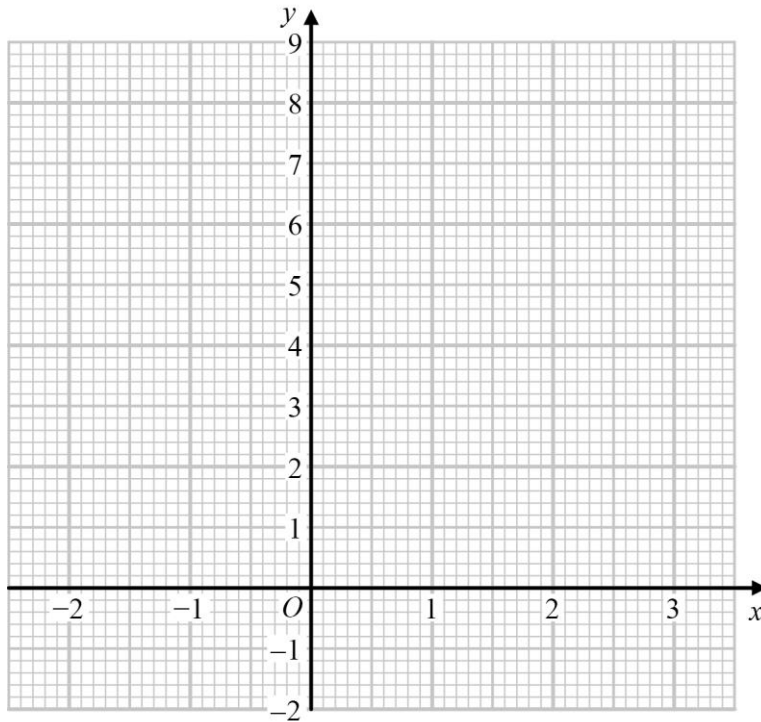
7 a Complete the table of values for $y = 2^x$

x	-2	-1	0	1	2	3
y		0.5				8

(2 marks)



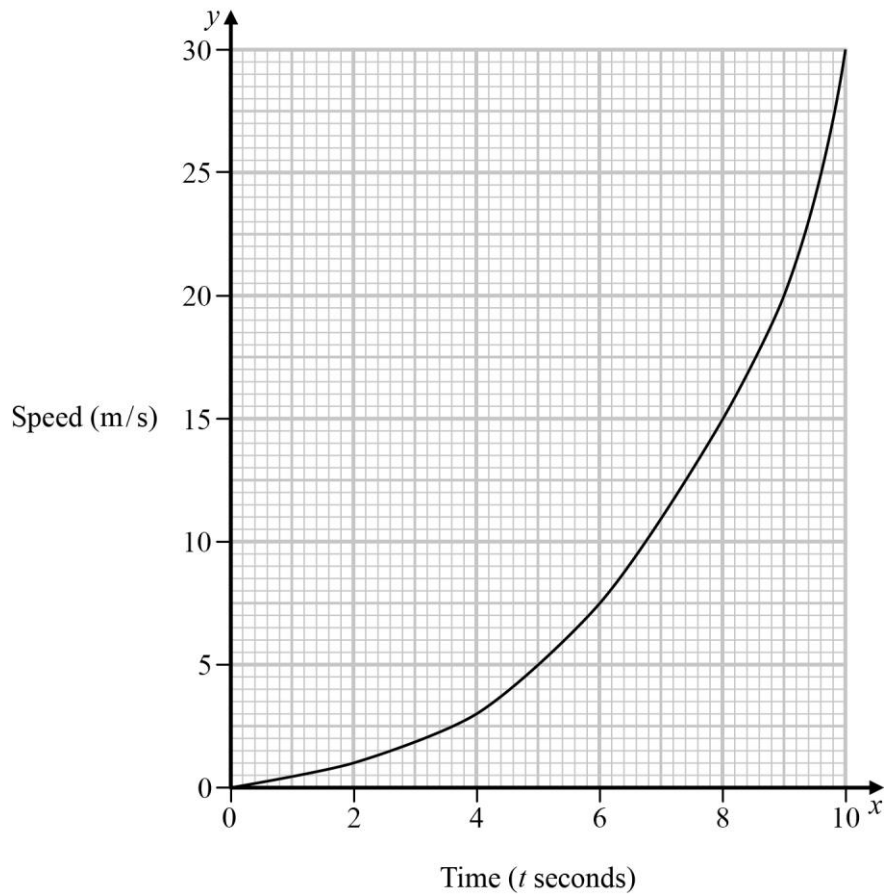
b On the grid, draw the graph of $y = 2^x$ for values of x from -2 to 3



(2 marks)



9 Here is a speed-time graph for a car.



- a** Work out an estimate for the distance the car travelled in the first 8 seconds.
Use four strips of equal width.

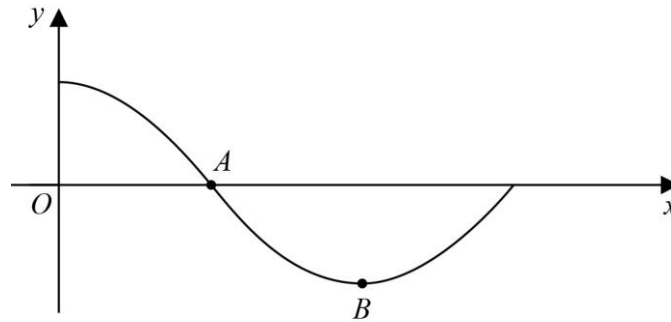
(3 marks)

- b** Is your answer to part **a** an *underestimate* or an *overestimate* of the actual distance?
Give a reason for your answer.

(1 mark)



11 The diagram shows part of a sketch of the curve $y = \cos x^\circ$



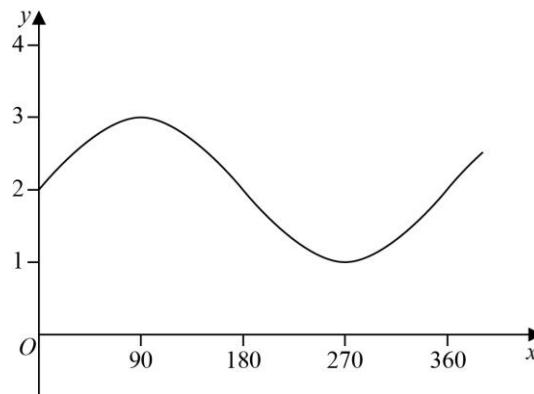
a Write down the coordinates of point A.

(1 mark)

b Write down the coordinates of point B.

(1 mark)

Here is a sketch of the curve $y = \cos(x + p)^\circ + q$, $0 \leq x \leq 360$



c Write down the values of p and q .

(2 marks)



13 The point $P(7, 4)$ is on the graph of $y = f(x)$.

The graph of $y = f(x)$ is transformed to give the graph of $y = -f(x + 5)$

Work out the coordinates of point P after the transformation.

(2 marks)

Overall mark	/50
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