

GCSE QUESTIONS

Q1. NON-CALCULATOR

The equation of the line L_1 is $y = 3x - 2$

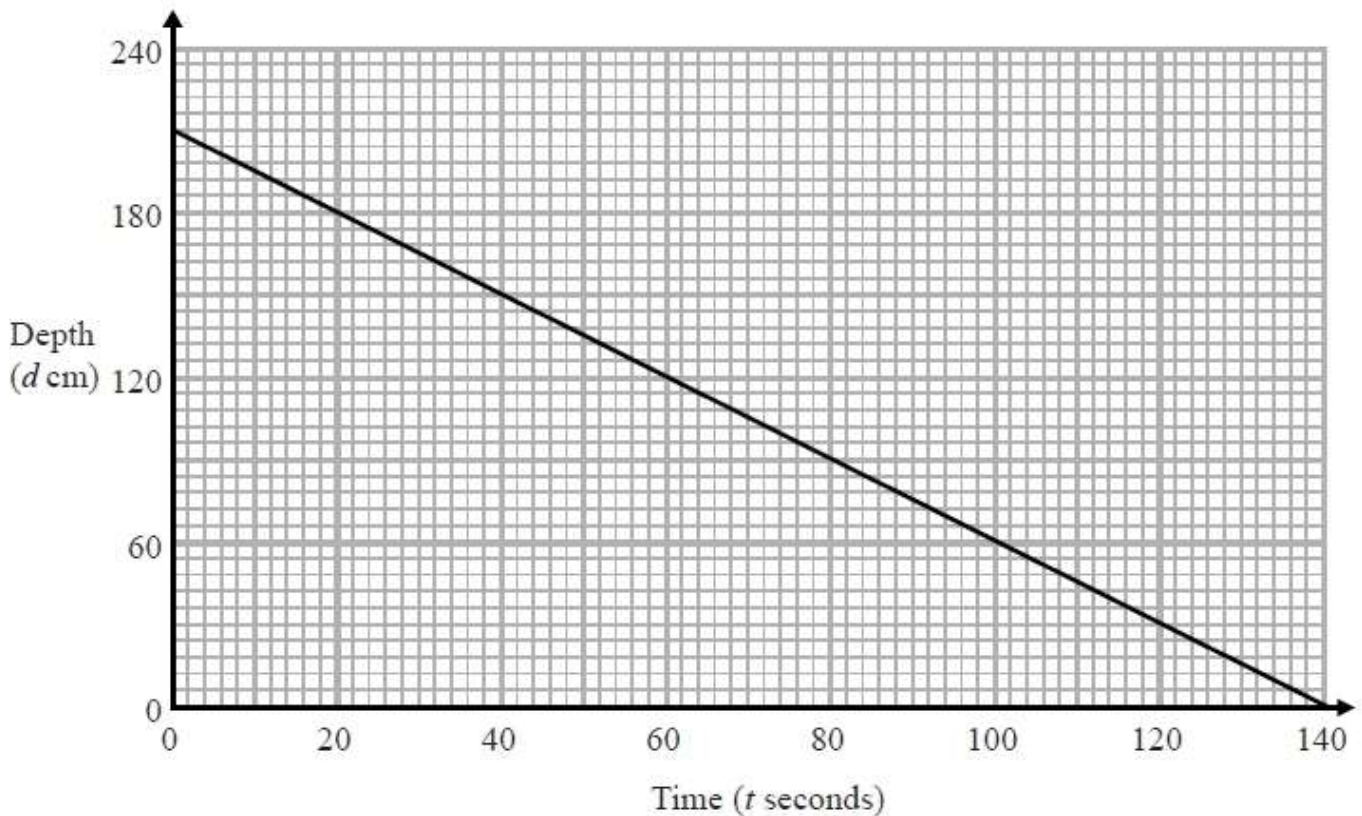
The equation of the line L_2 is $3y - 9x + 5 = 0$

Show that these two lines are parallel.

(Total for question = 2 marks)

Q2. CALCULATOR ALLOWED

The graph shows the depth, d cm, of water in a tank after t seconds.



(a) Find the gradient of this graph.

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(2)

(b) Explain what this gradient represents.

.....
.....

(1)
(Total for question is 3 marks)

Q3. CALCULATOR ALLOWED

Here are the equations of four straight lines.

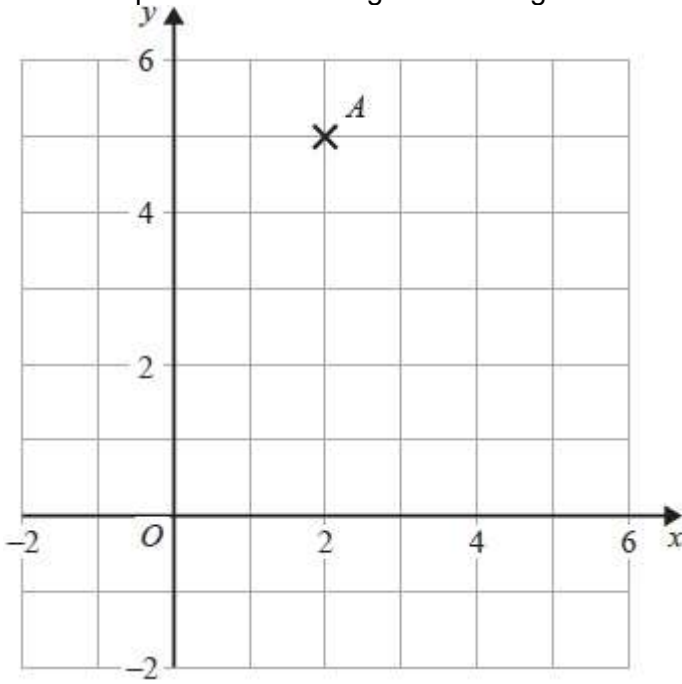
- Line A $y = 2x + 4$
- Line B $2y = x + 4$
- Line C $2x + 2y = 4$
- Line D $2x - y = 4$

Two of these lines are parallel. Write down the two parallel lines.

Line and line
(Total for question is 1 mark)

Q4. CALCULATOR ALLOWED

Find an equation of the straight line with gradient 3 that passes through point A.



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(Total for question = 2 marks)

Q5. CALCULATOR ALLOWED

A is the point with coordinates (5, 9)
B is the point with coordinates (d, 15)

The gradient of the line AB is 3

Work out the value of d.

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(Total for question = 3 marks)

Q6. CALCULATOR ALLOWED

The straight line **L** has the equation $3y = 4x + 7$

The point **A** has coordinates $(3, -5)$

Find an equation of the straight line that is perpendicular to **L** and passes through **A**.

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(Total for question = 3 marks)

Q7. CALCULATOR ALLOWED

A is the point with coordinates $(2, 10)$

B is the point with coordinates $(5, d)$

The gradient of the line **AB** is 4

Work out the value of d .

$d =$

(Total for question = 3 marks)

Q8. CALCULATOR ALLOWED

The straight line **L** has equation $3x + 2y = 17$

The point **A** has coordinates $(0, 2)$

The straight line **M** is perpendicular to **L** and passes through **A**.

Line **L** crosses the y -axis at the point **B**.

Lines **L** and **M** intersect at the point **C**.

Work out the area of triangle **ABC**.

You must show all your working.

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(Total for question = 5 marks)