

Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Gradient of a Line

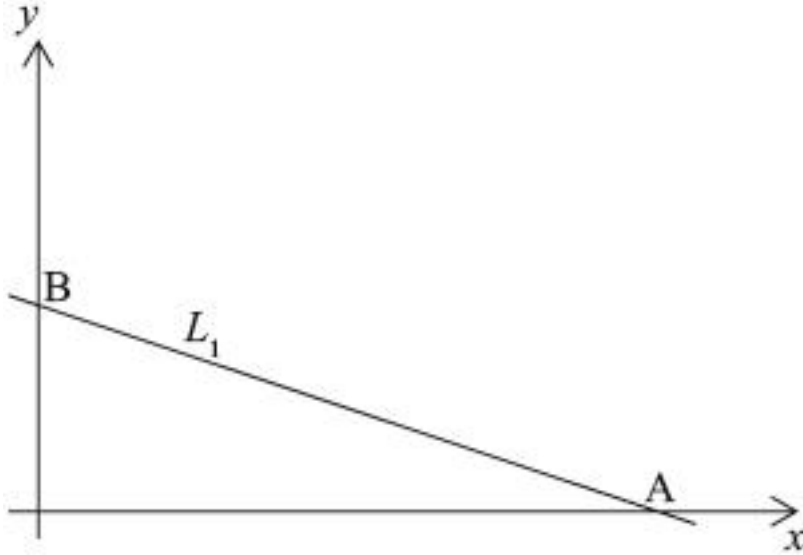
Calculator Allowed

INSTRUCTIONS TO CANDIDATES

- Write your name in the space provided.
- Write your answers in the spaces provided in this question paper.
- Answer ALL questions.
- Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.
- You should have a ruler, compass and protractor where required.

Total Marks :

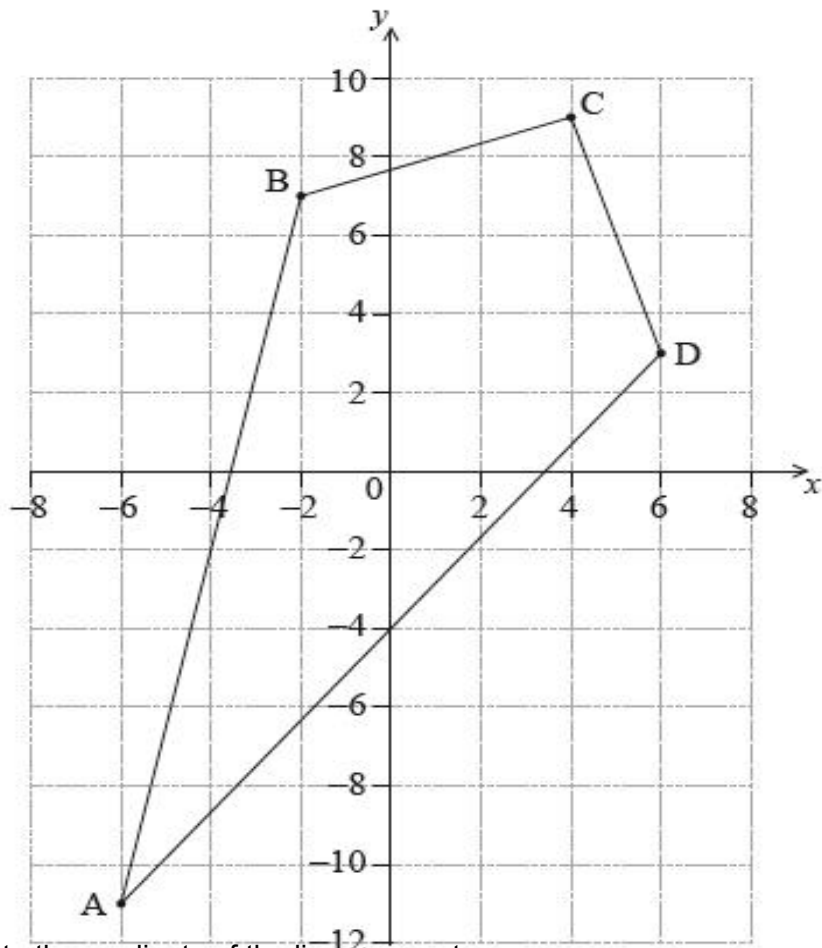
- 1) The diagram shows the straight line L_1 , which intersects the x-axis at A (6,0) and the y-axis at B (0,2) .



Write down the gradient of line segment AB.

Answer : _____ [2]

- 2) The four points $A(-6, -11)$, $B(-2, 7)$, $C(4, 9)$ and $D(6, 3)$ define the vertices of a kite.



- a) Calculate the gradients of the line segment
- i. AD

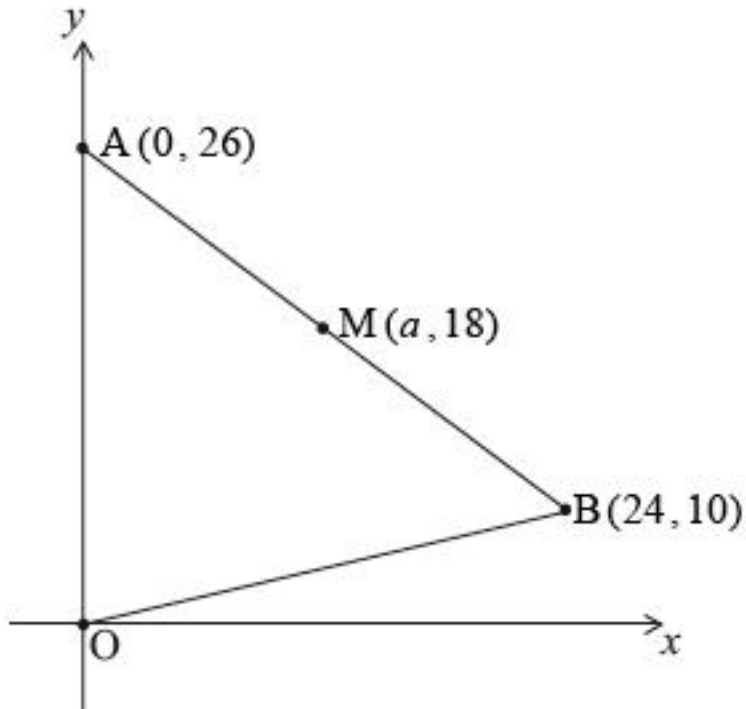
Answer : _____ [2]

- ii. BC

Answer : _____ [2]

- 3) The diagram shows the points $M(a, 18)$ and $B(24, 10)$. The straight line BM intersects the y -axis at $A(0, 26)$. M is the midpoint of the line segment AB .

diagram not to scale



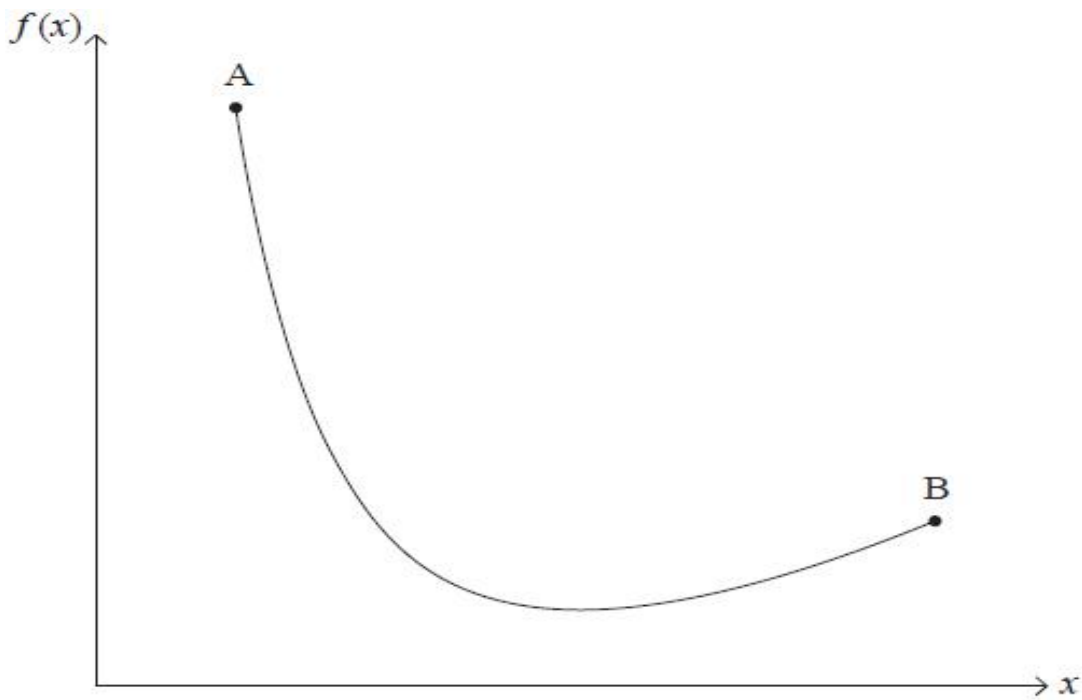
- a) What is the gradient of the line AB

Answer : _____ [2]

- b) What is the gradient of the line OB

Answer : _____ [2]

4) The graph of a function is shown below.

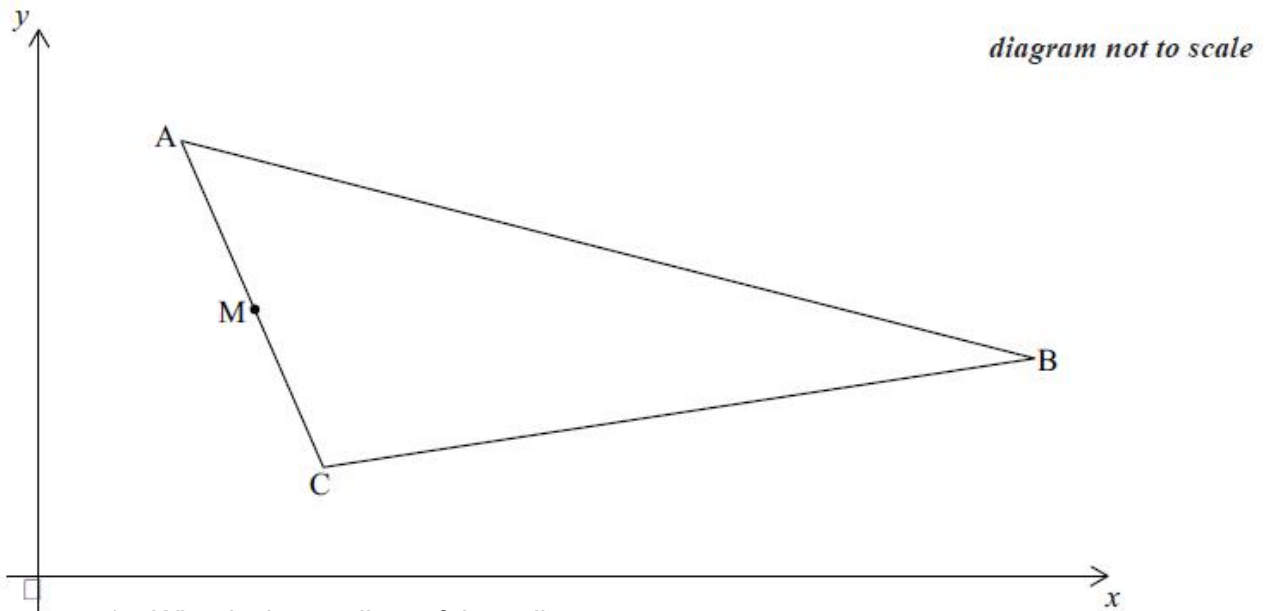


The points A and B have the coordinates (3,7) and (9,1) respectively.

Sophie draws a straight line between points A and B. What is the gradient of this straight line between A and B?

Answer : _____ [2]

- 5) The diagram shows points A(2, 8), B(14, 4) and C(4, 2).



- a) What is the gradient of these line segments

i. AC

Answer : _____ [2]

ii. AB

Answer : _____ [2]

iii. CB

Answer : _____ [2]

6) A line joins the points A(2, 1) and B(4, 5). Find the gradient of the line AB

7) P (4, 1) and Q (0, -5) are points on a straight line. Determine the gradient of PQ.

Answer : _____ [2]

8) The points A (-4, 1), B (0, 9) and C (4, 2) are plotted to make a triangle. What side of the triangle creates the steepest gradient. What is the value of this gradient?

Answer : _____ [2]

- 9) The vertices of quadrilateral ABCD are A (1,-2), B (-1.6, 3.2), C (-1, 5) and D (2, 2), with sides AB, BC, CD and DA.
- a) Which side of the quadrilateral has the largest gradient.

Vertices _____ and _____ create the largest gradient of _____ [3]

- b) Which side of the quadrilateral has the smallest gradient.

Vertices _____ and _____ create the smallest gradient of _____ [2]