MME
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GCSE MATHEMATICS

AQA | Edexcel | OCR | WJEC

(Level 4 - 5)

Gradient of Straight Lines

Please write clearly in block capitals

Forename:
Surname:

Materials

For this paper you must have:
- mathematical instruments

You must ***not*** use a calculator.

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

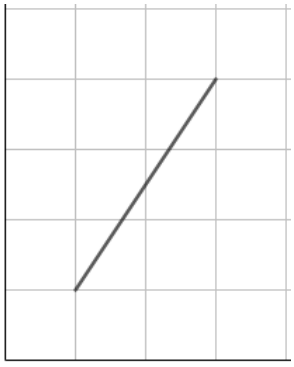
- The marks for questions are shown in brackets.
- You may ask for graph paper, tracing paper and more answer paper. These must be tagged securely to this answer book.

Advice

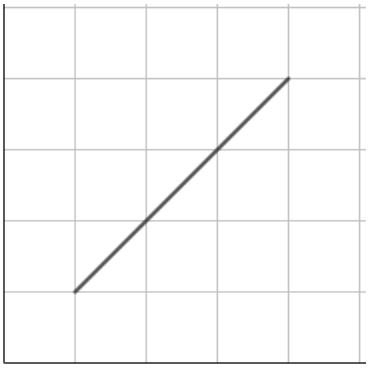
- In all calculations, show clearly how you work out your answer.

1 Calculate the gradient of each line on the centimetre grids below. *(Level 4)*

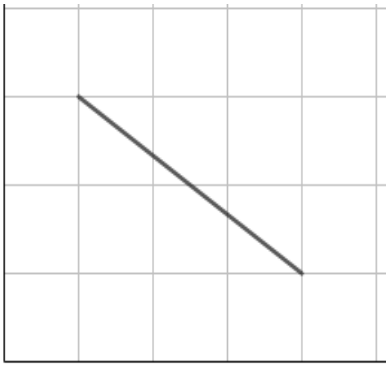
A



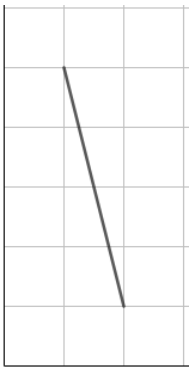
C



B



D



[4 marks]

Line A: _____

Line B: _____

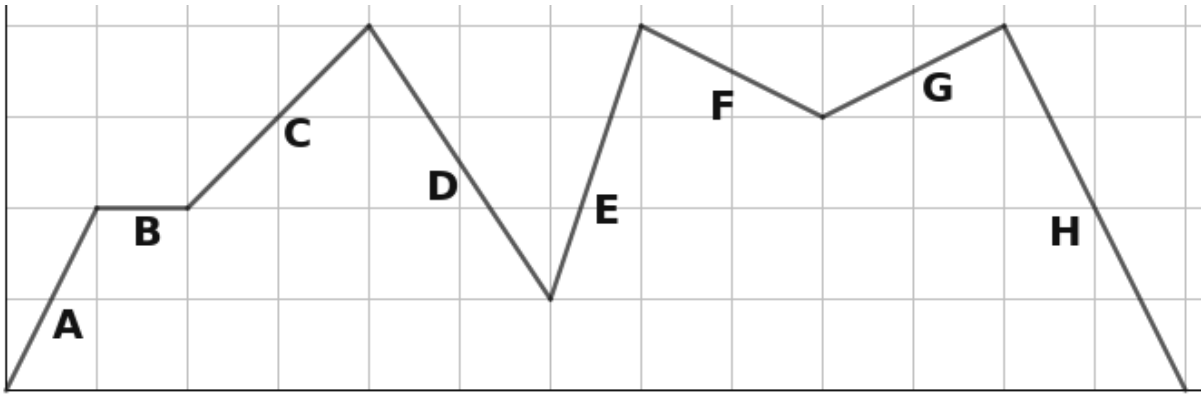
Line C: _____

Line D: _____

Turn over for next question

4

2 The line below represents the heights a walker reached during a long trail. *(Level 4)*



Which section of the graph shows the following?

2(a) The steepest positive gradient?

[1 mark]

Answer _____

2(b) The shallowest positive gradient?

[1 mark]

Answer _____

2(c) The steepest negative gradient?

[1 mark]

Answer _____

2(d) The shallowest negative gradient?

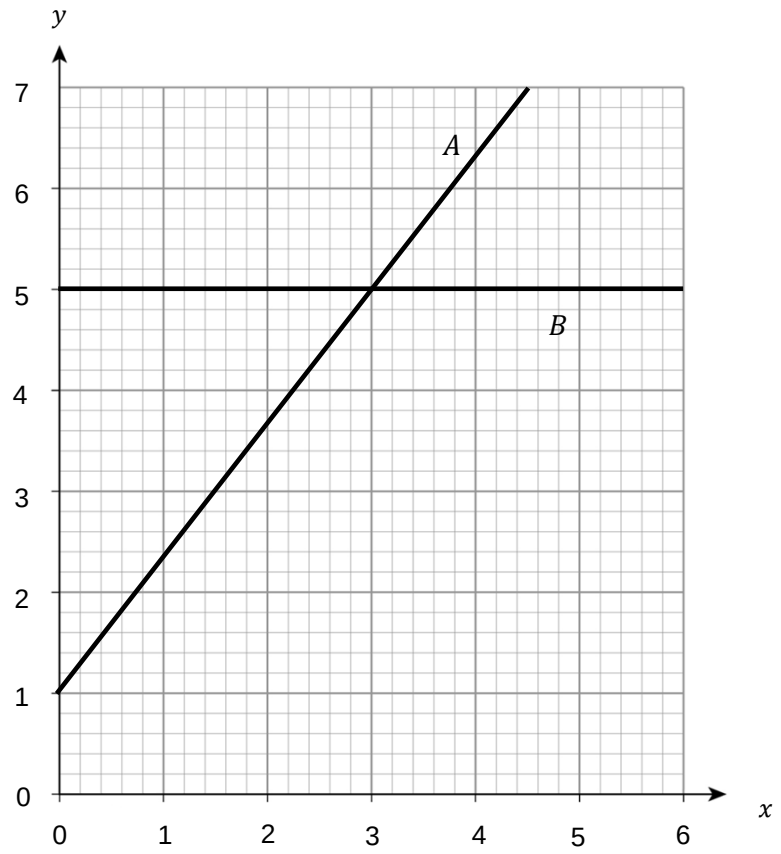
[1 mark]

Answer _____

Turn over for next question

4

3 A and B are straight lines that intersect. *(Level 4)*



3(a) Find the gradient for line A

[1 mark]

Answer _____

3(b) Find the gradient for line B

[1 mark]

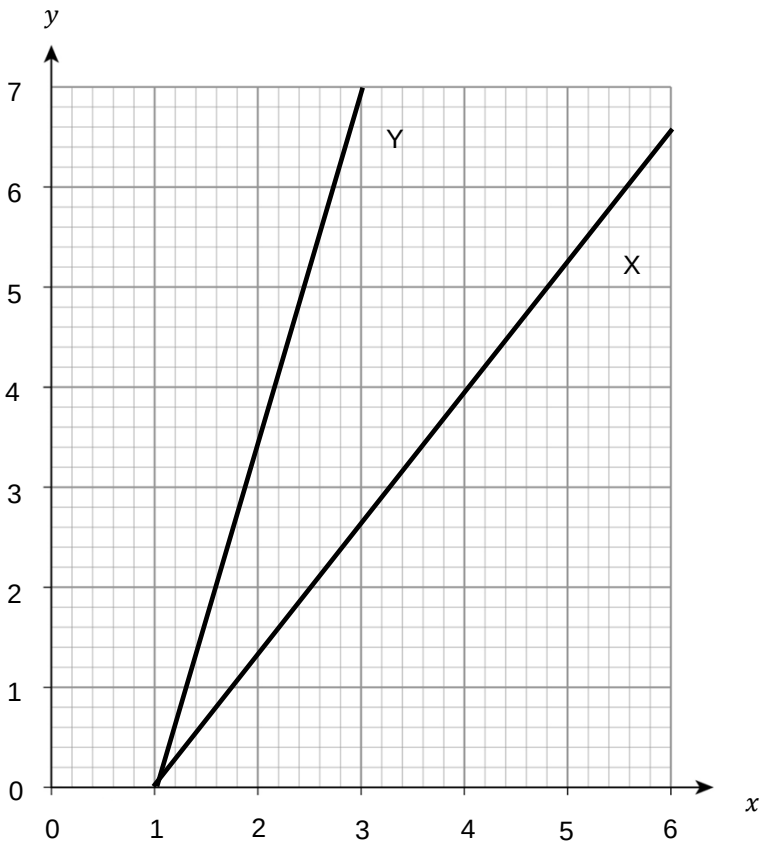
Answer _____

Turn over for next question

2

4(a) Calculate the gradients of lines X and Y below. *(Level 4)*

[2 marks]



Line X: _____

Line Y: _____

3

5(a) The points (1,5) and (8,7) are on the same straight line. *(Level 4)*

What is the gradient of the line?

[2 marks]

Answer _____

5(b) The points (3,6) and (7,-2) are on the same straight line.

What is the gradient of the line?

[2 marks]

Answer _____

6 Points A (x,y) and B are on the same straight line. ***(Level 5)***

The x-coordinate of B is three times the x-coordinate of A.

The y-coordinate of B is four times the y-coordinate of A.

What is the gradient of the line in terms of x and y?

[2 marks]

Answer _____

End of questions

6