

Name

ANSWERS

Class



MATHS TEACHER HUB

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Midpoints

(9 – 1) Topic booklet

Higher

These questions have been collated from previous years GCSE Mathematics papers.

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- Fill in the **boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**
- If the question is a **1H** question you are not allowed to use a calculator.
- If the question is a **2H** or a **3H** question, you may use a calculator to help you answer.

Information

- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Answer ALL questions

Write your answers in the space provided.

You must write down all the stages in your working.



- 12 A is the point with coordinates $(7, 13)$
 B is the point with coordinates $(-3, 21)$
 C is the point with coordinates $(15, 23)$

M is the midpoint of AB .

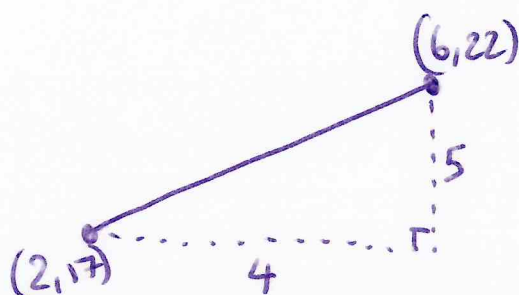
N is the midpoint of BC .

Work out the distance between M and N .

Give your answer correct to 1 decimal place.

$$\begin{array}{r} (7, 13) \\ + (-3, 21) \\ \hline 4 \quad 34 \end{array} \rightarrow (2, 17) = M$$

$$\begin{array}{r} (-3, 21) \\ + (15, 23) \\ \hline 12 \quad 44 \end{array} \rightarrow (6, 22) = N$$



6.4

November 2023 – Paper 2H

(Total for Question 12 is 3 marks)

$$\begin{aligned} \sqrt{4^2 + 5^2} &= \sqrt{41} \\ &= 6.403124237 \end{aligned}$$