

Edexcel GCSE

Mathematics (Linear) – 1MA0

USING A CASLCULATOR

Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.

Tracing paper may be used.

Items included with question papers

Nil



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.

Calculators may be used.

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.

Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

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.

1. Use your calculator to work out

$$(2.3 + 1.8)^2 \times 1.07$$

Write down all the figures on your calculator display.

$$(2.3 + 1.8)^2 \times 1.07$$

$$4.1^2 \times 1.07$$

$$16.81 \times 1.07$$

17.9867

(2 marks)

2. (a) Work out $\frac{4.6 + 3.85}{3.2^2 - 6.51}$

Write down all the numbers on your calculator display.

$$\frac{8.45}{3.73}$$

2.26541555

(3 marks)

3. Use your calculator to work out

$$\frac{13.7 + 5.86}{2.54 \times 3.17}$$

Write down all the figures on your calculator display.
You must give your answer as a decimal.

$$\frac{19.56}{8.0518}$$

$$\frac{2.429270474}{(2 \text{ marks})}$$

4. Use a calculator to work out

$$\frac{\sqrt{20.4}}{6.2 \times 0.48}$$

Write down all the figures on your calculator display.
Give your answer as a decimal.

$$\frac{4.516635916}{2.976}$$

$$\frac{1.5176868}{(2 \text{ marks})}$$

5. (a) Use your calculator to work out

$$\frac{\sqrt{21.5}}{5.8 - 2.36}$$

Write down all the figures on your calculator display.

$$\frac{4.636809248}{3.44}$$

$$\frac{1.347909665}{(2)}$$

- (b) Write down your answer to part (a) correct to 2 decimal places.

$$\frac{1.35}{(1)}$$

(3 marks)

6. (a) Use your calculator to work out the value of $\frac{45.6 \times 123}{0.34^2 - 0.28^2}$

Write down all the figures on your calculator display.

$$\frac{5608.8}{0.1156 - 0.0784} = \frac{5608.8}{0.0372}$$

$$\frac{150774.1935}{(2)}$$

- (b) Write your answer to part (a) correct to 3 significant figures.

$$\frac{151000}{(1)}$$

(3 marks)

7. (a) Use your calculator to work out $\frac{\sqrt{2.5^2 + 3.75}}{3.9 - 1.7}$

Write down all the figures on your calculator display.
You must give your answer as a decimal.

$$\frac{\sqrt{10}}{2.2} = \frac{3.16227766}{2.2}$$

1.437398936

(3)

- (b) Write your answer to part (a) correct to 2 decimal places.

1.44

(1)

(4 marks)

8. (a) Use your calculator to work out $\frac{38.5 \times 14.2}{18.4 - 5.9}$.

Write down all the figures on your calculator display.
You must give your answer as a decimal.

$$\frac{546.7}{12.5}$$

43.736

(2)

- (b) Write your answer to part (a) correct to 1 significant figure.

40

(1)

(3 marks)

9. Use your calculator to work out the value of $\frac{6.27 \times 4.52}{4.81 + 9.63}$

(a) Write down all the figures on your calculator display.

$$\begin{array}{r} 28.3404 \\ \hline 14.44 \end{array}$$

1.962631579

(2)

(b) Write your answer to part (a) to an appropriate degree of accuracy.

1.96

(1)

(3 marks)

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10. Use your calculator to work out the value of $\frac{8.95 + \sqrt{7.84}}{2.03 \times 1.49}$

(a) Write down all the figures on your calculator display.

$$\begin{array}{r} 11.75 \\ \hline 3.0247 \end{array}$$

3.884682778

(2)

(b) Write down your answer to part (a) correct to 3 significant figures.

3.88

(1)

(3 marks)

11. (a) Use your calculator to work out $\frac{\sqrt{19.2+2.6^2}}{2.7 \times 1.5}$
Write down all the figures on your calculator display.

$$\frac{\sqrt{25.96}}{4.05} = \frac{5.095095681}{4.05}$$

1.258048316

(2)

- (b) Write your answer to part (a) correct to 3 significant figures.

1.26

(1)
(3 marks)

12. Calculate the value of $\sqrt{\frac{\tan 60^\circ + 1}{\tan 60^\circ - 1}}$

Write down all the figures on your calculator display.
You must give your answer as a decimal.

$$\sqrt{\frac{2.732050808}{0.732050808}}$$

$$\sqrt{3.732050808}$$

1.931851653

(3 marks)

13. Use your calculator to work out

$$\sqrt{\frac{920 - 170 \tan 65^\circ}{0.012 + 0.034}}$$

- (a) Write down all the figures on your calculator display.
You must write your answer as a decimal.

$$\sqrt{\frac{555.4338235}{0.46}} = \sqrt{1207.464834}$$

$$\begin{array}{r} 34.7485947 \\ \hline \end{array} \quad (2)$$

- (b) Give your answer to part (a) correct to 3 significant figures.

$$\begin{array}{r} 34.7 \\ \hline \end{array} \quad (1)$$

(3 marks)
