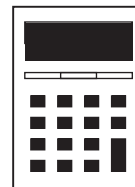# GCSE MATHEMATICS
Using your calculator

AQA These questions have been taken or modified from previous AQA GCSE Mathematics Papers.

Instructions
- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer **all** questions.
- You must answer the questions in the spaces provided.
- If your calculator does not have a π button, take the value of π to be 3.14 unless another value is given in the question.

Information
- The marks for questions are shown in brackets.
- The quality of your written communication is specifically assessed in questions that are indicated with an asterisk (*).

Advice
- Read each question carefully before you start to answer it.
- In all calculations, show clearly how you work out your answer.
- Use the number of marks for the question as a guide to the amount of time you need to spend.
- Look at previous parts of the question, e.g. a), b), c) i) as there may be information there you need to answer later parts.
- Check your answer is realistic and appropriate.
- For calculator decimal numbers always write your full calculator display in the working out area and then, if you need to, round the answer on the answer line.

1 (a)   Use your calculator to work out 3.8^3

Write down your full calculator display.

[1 mark]

Answer ....

1 (b)   Write your answer to (a) correct to one decimal place.

[1 mark]

....

Answer ....

2   Use your calculator to change $\frac{27}{64}$ to a decimal.

2 (a)   Write down your full calculator display.

Answer ....   *(1 mark)*

2 (b)   Give your answer to part (a) to 3 decimal places.

Answer ....   *(1 mark)*

3 (a)   Work out $3.8 + \sqrt{2.1}$

Give your answer as a decimal.
Write down your full calculator display.

....

Answer ....   *(1 mark)*

3 (b)   Give your answer to part (a) to 2 decimal places.

....

Answer ....   *(1 mark)*

4   Use your calculator to work out $\sqrt{30 + 80 \times \frac{1}{4}}$ as a decimal.

4 (a)   Write down your full calculator display.

Answer .... *(1 mark)*

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

Answer .... *(1 mark)*

5 (a)   Use your calculator to work out

$$\frac{5.39}{8.34 - 2.17}$$

5 (a) (i)   Write down your full calculator display.

Answer .... *(1 mark)*

5 (a) (ii) Give your answer to 2 decimal places.

Answer .... *(1 mark)*

5 (b)   Calculate the reciprocal of 0.8

....

Answer .... *(1 mark)*

6   Use your calculator to work out $\dfrac{3.17 + 8.42}{16.3 - 7.84}$

6 (a)   Write down your full calculator display.
Give your answer as a decimal.

....

Answer .... *(1 mark)*

6 (b)   Write your answer to part **(a)** to 3 significant figures.

....

Answer .... *(1 mark)*

7 (a)   Use your calculator to work out   6.7 + 21.5 – 3.09

[1 mark]

Answer ....

7 (b)   Use your calculator to work out 265×89

[1 mark]

Answer ....

7 (c)   Use your calculator to work out $\sqrt{227}$
Write down your full calculator display.

[1 mark]

Answer ....

7 (d)   Give your answer to part (c) to 1 decimal place.

[1 mark]

Answer ....

8   Use your calculator to work out $\dfrac{3.21 + 4.89}{5.62 - 1.89}$ as a decimal.

8 (a)   Write down your full calculator display.

[1 mark]

....

Answer ....

8 (b)   Write your answer to 1 decimal place.

[1 mark]

....

Answer ....

9 (a) Use your calculator to work out $\dfrac{23.5 \times 11.2}{16}$

[1 mark]

Answer ....

9 (b) Use your calculator to work out $\sqrt{360}$
Write the full calculator display.

[1 mark]

Answer ....

9 (c) Give your answer to part (b) to 3 decimal places.

[1 mark]

Answer ....

10 (a) Use your calculator to work out $\dfrac{\sqrt{24^2 + 18 \div 8}}{3.2^3}$

Write down your full calculator display.

[1 mark]

....

Answer ....

10 (b) Write your answer to part (a) to 4 significant figures.

[1 mark]

....

Answer ....

11 (a) Use your calculator to work out $\cos(\sin^{-1} 0.76)$

Write down the first 6 digits of your calculator display.

[1 mark]

Answer ....

11 (b) Write your answer to (a) to 3 significant figures.

[1 mark]

Answer ....

12 Use your calculator to work out $\sin(\cos^{-1} 0.6372)$

12 (a) Write down your full calculator display.

....

Answer ....   *(1 mark)*

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

....

Answer ....   *(1 mark)*

13 Use your calculator to work out $\dfrac{(2.8 \times 10^7) + (8 \times 10^6)}{4.5 \times 10^8}$

Give your answer in standard form.

....

Answer ....   *(2 marks)*

13 (a) The only number keys that work on a calculator are

$\boxed{2}$ and $\boxed{5}$

Complete the following to show **two** ways to make 8 with this calculator.

$\boxed{}$ **+** $\boxed{}$ **+** $\boxed{}$ **+** $\boxed{}$ **=** 8

$\boxed{}$ **+** $\boxed{}$ **−** $\boxed{}$ **=** 8

(2 marks)

13 (b) The only number keys that work on a **different** calculator are

$\boxed{3}$ and $\boxed{7}$

13 (b) (i) Complete the following to show how you can make 2 with this calculator.

$\boxed{}$ **×** $\boxed{}$ **−** $\boxed{}$ **=** 2

(1 mark)

13 (b) (ii) Complete the following to show how you can make 63 with this calculator.

$\boxed{}$ **×** $\boxed{}$ **×** $\boxed{}$ **=** 63

(1 mark)

14 Ranvir uses this formula in a science lesson.

$$t = \frac{v - u}{a}$$

Her correct working is shown.

$$t = \frac{19.2 - 7.85}{2.6}$$

14 (a) Use your calculator to work out the value of t.
Give your answer as a decimal.
Write down your full calculator display.

Answer .... *(1 mark)*

14 (b) Give your answer to (a) to 1 decimal place.

Answer .... *(1 mark)*

14 (c) Rearrange Ranvir's formula to make **u** the subject

....

....

....

Answer .... *(2 marks)*