

FULL MODEL ANSWERS

Q1. CALCULATOR ALLOWED

Work out $\frac{30 + 12}{5 + 3}$ ← Calculate numerator: 42
← Calculate denominator: 8

$$\frac{42}{8}$$

$$5.25$$

(Total for question is 1 mark)

Q2. CALCULATOR ALLOWED

Find the value of $\frac{5.27 + 3.5}{7.9 - 4.36}$ ← 8.77
← 3.54

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

$$\frac{8.77}{3.54}$$

$$2.4774011299435$$

(Total for question = 2 marks)

Q3. CALCULATOR ALLOWED

Work out the value of $\frac{\sqrt{2.7} + 6.5}{4.8 - 1.06}$ ← 8.143167673
← 3.74

Give your answer correct to 2 decimal places.

$$\frac{8.143167673}{3.74}$$

$$2.18 \quad (2dp)$$

(Total for question = 3 marks)

Q4. CALCULATOR ALLOWED

Find the value of $(2.8 - 0.45)^2 + \sqrt[3]{5.832}$
 $2.35 \boxed{x^2} = 5.5225$ $\sqrt[3]{\boxed{5.832}} = 1.8$

$$5.5225 + 1.8$$

$$7.3225$$

(Total for question = 2 marks)

Q5. CALCULATOR ALLOWED

(a) Use your calculator to work out $\frac{29^2 - 4.6}{\sqrt{35 - 1.9^3}}$ ← $29 \boxed{x^2} - 4.6 = 836.4$

Write down all the figures on your calculator display.

$$1.9 \boxed{x^3} = 6.859$$

$$\sqrt{\boxed{35 - 6.859}} = 5.304809139$$

$$\frac{836.4}{5.304809139}$$

$$157.668255$$

(2)

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

4 most important digits

$$157.6 \underline{6} 8255$$

$$157.7$$

(1)

(Total for question = 3 marks)

Q6. CALCULATOR ALLOWED

$$\frac{4.36 + 2.8^3}{6.8 - 5.42} \leftarrow 4.36 + 2.8 \boxed{x^3} = 26.312$$

(a) Work out $\frac{4.36 + 2.8^3}{6.8 - 5.42} \leftarrow 1.38$

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

$$\frac{26.312}{1.38}$$

$$\frac{19.0\dot{6}}{\text{(or } 19.0666666\dots)} \quad (2)$$

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

$$\frac{19.0\dot{6}66666}{19.1} \quad (1)$$

(Total for question = 3 marks)

Q7. CALCULATOR ALLOWED

$$\frac{29^3 - 4.6}{\sqrt{35 - 1.9^3}} \leftarrow 841 - 4.6 = 836.4$$

(a) Use your calculator to work out $\frac{29^3 - 4.6}{\sqrt{35 - 1.9^3}} \leftarrow \sqrt{35 - 6.859}$

Write down all the figures on your calculator display.

$$= \sqrt{28.141} = 5.304809139$$

$$\frac{836.4}{5.304809139}$$

$$\frac{157.668255}{157.6\dot{6}8255} \quad (2)$$

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

4 most important digits

$$\frac{157.6\dot{6}8255}{157.7} \quad (1)$$

(Total for question = 3 marks)

Q8. CALCULATOR ALLOWED

$$\frac{\sqrt{13.4 - 1.5}}{(6.8 + 0.06)^2} \leftarrow \sqrt{11.9} = 3.449637662$$

Find the value of $\frac{\sqrt{13.4 - 1.5}}{(6.8 + 0.06)^2} \leftarrow 6.86^2 = 47.0596$

Write down all the figures on your calculator display.

$$\frac{3.449637662}{47.0596}$$

$$\frac{0.07330359081}{0.07330359081} \quad (2)$$

(Total for question = 2 marks)