

SMART EXAM RESOURCES
0580 EXTENDED MATH
TOPIC: NUMBERS
SUB-TOPIC: USING A CALCULATOR
QUESTIONS BASED ON POWERS AND ROOTS
SET-1-QP-MS

1

Calculate the value of $\frac{1}{2}\sqrt{\frac{1}{2} + \frac{1}{2}\sqrt{\frac{1}{2}}}$

(a) writing down all the figures in your calculator answer,

Answer(a) [1]

(b) writing your answer correct to 4 significant figures.

Answer(b) [1]

MARK SCHEME:

(a) 0.461939(...)	1	
(b) 0.4619 or ft	1 ft	

- 2 Use your calculator to find the value of $2^{\sqrt{3}}$.
Give your answer correct to 4 significant figures.

Answer [2]

MARK SCHEME:

3.322 cao	2	B1 3.3219(...) or 3.32(20) seen
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3 (a) Calculate $\sqrt[3]{7^{1.5} + 22^{0.9}}$ and write down your full calculator display.

Answer(a) [1]

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

Answer(b) [1]

MARK SCHEME:

(a)	3.26077...	1	seen
(b)	3.261	1ft	their (a) to 4 significant figures

4 (a) Calculate $\sqrt{5.7} - 1.03^2$.

Write down all the numbers displayed on your calculator.

Answer(a) [1]

(b) Write your answer to **part (a)** correct to 3 decimal places.

Answer(b) [1]

MARK SCHEME:

(a)	1.32656...	1	
(b)	1.327	1ft	

5

(a) Use your calculator to work out $\sqrt{65} - 1.7^2$.

Write down all the numbers displayed on your calculator.

Answer(a) [1]

(b) Write your answer to **part (a)** correct to 2 significant figures.

Answer(b) [1]

MARK SCHEME:

(a)	5.17225...	1	
(b)	5.2	1FT	FT <i>their</i> (a)

6

Use a calculator to find

(a) $\sqrt{5\frac{5}{24}}$,

Answer(a) [1]

MARK SCHEME:

(a)	[±] 2.28 or 2.282 to 2.2822	1	
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7

Use your calculator to work out $\sqrt{\frac{3}{4}} + 2^{-1}$.

Give your answer correct to 2 decimal places.

Answer [2]

MARK SCHEME:

1.37	2	B1 for 0.866... or $\frac{\sqrt{3}}{2}$ or 0.5 or $\frac{1}{2}$ or B1 for 1.366... as final answer
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- 8 (a) Use your calculator to find the value of $7.5^{-0.4} \div \sqrt{57}$.
Write down your full calculator display.

Answer(a) [1]

- (b) Write your answer to **part (a)** in standard form.

Answer(b) [1]

MARK SCHEME:

(a)	0.059161...	1	
(b)	$5.9161... \times 10^{-2}$	1FT	ft <i>their</i> part (a)

9

Use your calculator to work out $\sqrt{10 + 0.6 \times (8.3^2 + 5)}$.

Answer [1]

MARK SCHEME:

7.37 or 7.371...	1	
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10

Use a calculator to find the decimal value of

$$\frac{\sqrt{29 - 3 \times 32^{0.4}}}{3}$$

Answer(b) [1]

MARK SCHEME:

| 1.37 or 1.37[4...] |

| **1** |

11 (a) Calculate $\sqrt{2.38 + 6.4^2}$, writing down your full calculator display.

..... [1]

(b) Write your answer to **part (a)** correct to 4 decimal places.

..... [1]

MARK SCHEME:

(a)	6.58331...	1	
(b)	6.5833	1	FT <i>their</i> (a) correctly rounded to 4 dp