

SMART EXAM RESOURCES
0580 EXTENDED MATH
TOPIC: NUMBERS
SUB-TOPIC: USING A CALCULATOR
QUESTIONS BASED ON POWERS AND ROOTS
SET-2-QP-MS

1 Use your calculator to work out

(a) $\sqrt{(7 + 6 \times 243^{0.2})}$,

Answer(a) [1]

MARK SCHEME:

(a) (±) 5	1
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2

Use a calculator to find the value of $\sqrt{(5.4(5.4 - 4.8)(5.4 - 3.4)(5.4 - 2.6))}$.

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

Answer(a) [1]

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

Answer(b) [1]

MARK SCHEME:

(a) 4.25957(744...) or 4.25958 (b) 4.3	1 1✓	Must have at least 6 figures correct Correct answer or ft from (a)
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3 Use a calculator to work out the **exact** value of

$$1 + \frac{1}{5} + \left(\frac{1}{5}\right)^2 + \left(\frac{1}{5}\right)^3 + \left(\frac{1}{5}\right)^4 .$$

Answer [2]

MARK SCHEME:

1.2496 cao	2	Allow $1 \frac{156}{625}$ M1 $1 + 0.2 + 0.04 + 0.008 + 0.0016$
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4 Use your calculator to find $\sqrt{\frac{45 \times 5.75}{3.1 + 1.5}}$.

Answer [2]

MARK SCHEME:

7.5(0) cao	2	M1 for $\frac{258.75}{4.6}$
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5

Use your calculator to find the value of

(a) $3^0 \times 2.5^2$,

Answer(a) [1]

(b) 2.5^{-2} .

Answer(b) [1]

MARK SCHEME:

(a) 6.25	cao	1	
(b) 0.16	cao	1	

6

Use your calculator to find the value of

$$\frac{8.1^2 + 6.2^2 - 4.3^2}{2 \times 8.1 \times 6.2}$$

Answer [2]

MARK SCHEME:

[0].852 or $\frac{23}{27}$	2	B1 for 85.56 or $\frac{2139}{25}$
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7

Use a calculator to work out the following.

(a) $3(-4 \times 6^2 - 5)$

Answer(a) [1]

MARK SCHEME:

| (a) -447

| 1 |

8 (a) Use a calculator to work out $\frac{5^{0.4} - \sqrt{3}}{0.13 - 0.015}$.

Write down all the digits in your calculator display.

..... [1]

MARK SCHEME:

1.49220....	1	
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