

SMART EXAM RESOURCES
CAMBRIDGE LOWER SECONDARY
STAGE 7 TOPIC QUESTIONS

MATHS

SQUARE-CUBE-NUMBERS AND THEIR ROOTS
SET-1

1 Ahmed says, '29 is a cube number.'

Tick (✓) to show if he is correct.

Yes

☐

No

☐

Explain how you know.

.....

.....

[1]

MARK SCHEME

No ticked and $3 \times 3 \times 3 = 27$ and $4 \times 4 \times 4 = 64$ so 29 is in between or equivalent.	1	Accept no and $\sqrt[3]{29}$ is not a whole number or equivalent. Accept no and the cube numbers are (1), (8), 27, 64 or equivalent.
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2 Angelique looks at the numbers from 10 to 90

She says,

‘Between 10 and 90, there are 6 **more** square numbers than cube numbers.’

Tick (✓) to show if she is correct or not correct.

Correct

☐

Not correct

☐

Explain how you know.

.....

.....

.....

[2]

MARK SCHEME

Not correct ticked and A correct explanation given, e.g. [square numbers] 16, 25, 36, 49, 64, 81 [cube numbers] 27 and 64	2	Award 1 mark for showing [square numbers] 16, 25, 36, 49, 64, 81 or [cube numbers] 27 and 64	Accept equivalent correct explanations. Just ticking Not correct without any correct working scores 0 marks.
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- 3 Jamila says, '64 is both a square number and a cube number.'

Show that she is correct.

[1]

MARK SCHEME

(64 =) 8^2 and 4^3	1		Accept equivalent, e.g. (64 =) 8×8 and $4 \times 4 \times 4$ Accept $\sqrt{64} = 8$ and $\sqrt[3]{64} = 4$
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- 4 Write a number in each box to make each statement correct.

$$\sqrt[3]{\square} = 4$$

$$121 = \square^2$$

[1]

64 and 11	1	Both answers correct for the mark. Accept – 11
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