



THIRD SPACE  
LEARNING

# GCSE Exam Questions

Cube Numbers | Number

## GCSE Exam Questions: Cube Numbers

1) Work out the value of:

(a)  $5^3$

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(1)

(b)  $0.5^3$

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(1)

(c)  $(-8)^3$

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(1)  
(3 marks)

2) Work out the value of:

(a)  $\sqrt[3]{27}$

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(1)

(b)  $\sqrt[3]{125} \times \sqrt[3]{64}$

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(1)

(c)  $\sqrt[3]{-27} - \sqrt[3]{-8}$

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(1)  
(3 marks)

## GCSE Exam Questions: Cube Numbers

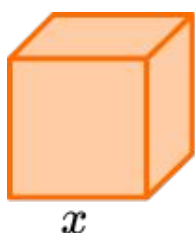
- 3) Arrange the values in order starting with the smallest.

$$\sqrt{144}, 2^3, \sqrt{81}, \sqrt[3]{343}$$

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(3)  
(3 marks)

- 4) Here is a cube with a volume of  $216\text{mm}^3$

- (a) Work out the value of  $x$ .



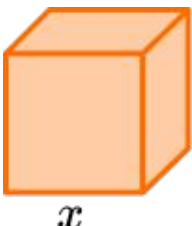
$$\text{Volume} = 216\text{mm}^3$$

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(2)

- (b) Work out the surface area of the cube.

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(2)  
(4 marks)

# GCSE Exam Questions: Cube Numbers Answers

	Question	Answer	Marks
<b>1) (a)</b>	Work out the value of $5^3$	<b>(a)</b> 125	<b>(1)</b>
<b>(b)</b>	$0.5^3$	<b>(b)</b> 0.125	<b>(1)</b>
<b>(c)</b>	$(-8)^3$	<b>(c)</b> - 512	<b>(1)</b>
<b>2) (a)</b>	Work out the value of: $\sqrt[3]{27}$	<b>(a)</b> 3	<b>(1)</b>
<b>(b)</b>	$\sqrt[3]{125} \times \sqrt[3]{64}$	<b>(b)</b> 20	<b>(1)</b>
<b>(c)</b>	$\sqrt[3]{-27} - \sqrt[3]{-8}$	<b>(c)</b> - 1	<b>(1)</b>
<b>3)</b>	Arrange the values in order starting with the smallest. $\sqrt{144}, 2^3, \sqrt{81}, \sqrt[3]{343}$	$\sqrt{144} = 12$ or $\sqrt{81} = 9$ $\sqrt[3]{343} = 7$ and $2^3 = 8$ $\sqrt[3]{343}, 2^3, \sqrt{81}, \sqrt{144}$	<b>(1)</b> <b>(1)</b> <b>(1)</b>
<b>4)</b> <b>(a)</b>	Shown below is cube with a volume of $216\text{mm}^3$ . Work out the value of $x$ .  $\text{Volume} = 216\text{mm}^3$ $x$	$\sqrt[3]{216}$ 6mm	<b>(1)</b> <b>(1)</b>
<b>(b)</b>	Work out the surface area of the cube.	$(6 \times 6) \times 6$ $= 216\text{mm}^2$	<b>(1)</b> <b>(1)</b>

# Where to go next?

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