

Cube Root

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Examples



Workout

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Question 1: Work out each of the following

- (a) $\sqrt[3]{8}$ (b) $\sqrt[3]{1}$ (c) $\sqrt[3]{0}$ (d) $\sqrt[3]{125}$ (e) $\sqrt[3]{1000}$ (f) $\sqrt[3]{27}$
(g) $\sqrt[3]{512}$ (h) $\sqrt[3]{64}$ (i) $\sqrt[3]{343}$ (j) $\sqrt[3]{729}$ (k) $\sqrt[3]{216}$ (l) $\sqrt[3]{8000}$

Question 2: Below is a list of numbers.

0 1 4 7 8 9 11 15 20 27 30

From the list write down:

- (a) The cube root of 64
(b) The cube root of 1
(c) The cube root of 27000
(d) The cube root of 512

Question 3: Work out each of the following
You may use a calculator

- (a) $\sqrt[3]{1331}$ (b) $\sqrt[3]{13824}$ (c) $\sqrt[3]{1728}$ (d) $\sqrt[3]{3375}$ (e) $\sqrt[3]{2744}$ (f) $\sqrt[3]{125000}$
(g) $\sqrt[3]{0.125}$ (h) $\sqrt[3]{42.875}$ (i) $\sqrt[3]{0.064}$ (j) $\sqrt[3]{1.728}$ (k) $\sqrt[3]{17.576}$ (l) $\sqrt[3]{1.953125}$

Question 4: Between which two consecutive integers do each of the following lie between?
e.g. $\sqrt[3]{200}$ lies between 5 and 6

- (a) $\sqrt[3]{50}$ (b) $\sqrt[3]{20}$ (c) $\sqrt[3]{400}$ (d) $\sqrt[3]{5}$ (e) $\sqrt[3]{950}$ (f) $\sqrt[3]{777}$

Question 5: Estimate each of the following.
Give each estimate to 1 decimal place.

- (a) $\sqrt[3]{45}$ (b) $\sqrt[3]{130}$ (c) $\sqrt[3]{500}$ (d) $\sqrt[3]{3}$ (e) $\sqrt[3]{90}$ (f) $\sqrt[3]{140}$

Question 6: Using your calculator, work out the answers to Question 5.

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Question 1: James says the cube root of 64 is 8. Explain his mistake.

$$\sqrt[3]{64}$$

Question 2: Megan says the cube root of 27 is 9. Explain her mistake.

$$\sqrt[3]{27}$$

Question 3: The cube root of 1 is 1.
Find another number so that when it is cube rooted, it gives the same value.

Question 4: Harry has thought of a number.
He works out the cube root of the number.
Harry says his answer is larger than his starting number.
Archie says he must be wrong.

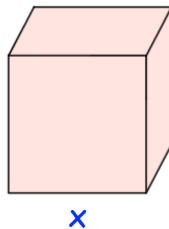
Show that Harry could be correct.

Question 5: Work out the following cube roots

(a) $\sqrt[3]{-8}$ (b) $\sqrt[3]{-1}$ (c) $\sqrt[3]{-27}$ (d) $\sqrt[3]{-1000}$

Question 6: Shown is a cube with a volume of 8000cm^3
Find x

Volume = 8000cm^3



Answers



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