THIRD SPACE LEARNING

Cube Root Worksheet

Algebra

Grades 6 to 8

Questions

Name: .....

Date: .....

1 Cube the number 5.

Answer

2 Cube the number −4.

Answer

3 Cube the fraction $\frac{2}{5}$.

Answer

4 Cube the negative fraction $(-\frac{1}{3})$.

Answer

5 Cube the expression $3x$.

Answer

6 Cube the expression $-2x^2$

Answer

7 Simplify the cube root $\sqrt[3]{27}$.

Answer

8 Simplify the cube root $\sqrt[3]{-64}$.

Answer

9 Evaluate $\sqrt[3]{0.008}$.

Answer

10 Find the approximate value of $\sqrt[3]{54}$.

Answer

11 Talia says that you cannot find the cube root of a negative number because you get an error on the calculator. Julian says you can find the cube root of a negative number. Who is correct?

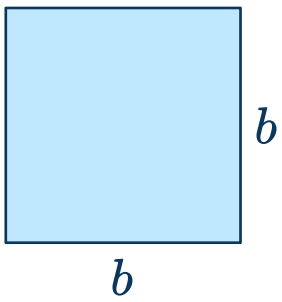
Answer

12 A) Write an expression for the area of the square below.

Answer

B) Find the area if $b = 8$

Answer

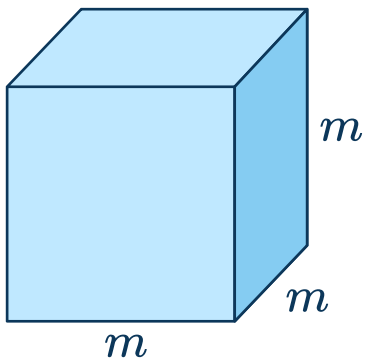


13 A) Write an expression for the volume of the cube below.

Answer

B) Find the volume of the cube if the side length is 12 units

Answer



14 Simplify the expression $\sqrt[3]{8x^6}$

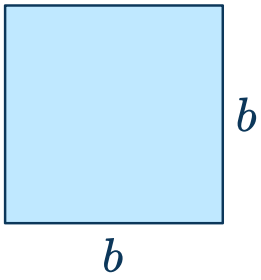
Answer

15 Simplify the expression $\sqrt[3]{-27a^9}$

Answer

Answers

Question number	Question	Answers	Standard
1	Cube the number 5.	$5^3 = 125$	8.EE.A.1
2	Cube the number −4.	$(-4)^3 = -64$	8.EE.A.1
3	Cube the fraction $\frac{2}{5}$.	$(\frac{2}{5})^3 = \frac{8}{125}$	8.EE.A.1
4	Cube the negative fraction $(-\frac{1}{3})$.	$(-\frac{1}{3})^3 = -\frac{1}{27}$	8.EE.A.1
5	Cube the expression $3x$.	$(3x)^3 = 27x^3$	8.EE.A.1
6	Cube the expression $-2x^2$	$(-2x^2)^3 = -8x^6$	8.EE.A.1
7	Simplify the cube root $\sqrt[3]{27}$.	$\sqrt[3]{27} = 3$	8.EE.A.1
8	Simplify the cube root $\sqrt[3]{-64}$.	$\sqrt[3]{-64} = -4$	8.EE.A.1
9	Evaluate $\sqrt[3]{0.008}$.	$\sqrt[3]{0.008} = 0.2$	8.EE.A.1
10	Simplify the expression $\sqrt[3]{54}$.	$\sqrt[3]{54} \approx 3.8$	8.EE.A.1
11	Talia says that you cannot find the cube root of a negative number because you get an error on the calculator. Julian says you can find the cube root of a negative number. Who is correct?	Julian is correct because (-2)(-2)(-2)=-8 which means the $\sqrt[3]{-8} = -2$. You can take the cube root of negative numbers but you cannot take the square root of negative numbers.	8.EE.A.1

Question number	Question	Answers	Standard
12	A) Write an expression for the area of the square below. B) Find the area if $b = 8$ 	A) $A = b^2$ B) $A = (8)^2 = 64$ units²	8.EE.A.1
13	A) Write an expression for the volume of the cube below. B) Find the volume of the cube if the side length is 12 units	A) $V = m^3$ B) $V = (12)^3 = 1,728$ units³	8.EE.A.1
14	Simplify the expression $\sqrt[3]{8x^6}$	$\sqrt[3]{8x^6} = 2x^2$	8.EE.A.1
15	Simplify the expression $\sqrt[3]{-27a^9}$	$\sqrt[3]{-27a^9} = -3a^3$	8.EE.A.1

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