Quiz: Real numbers

Section: Cube Roots of Rational Numbers and Real-Life Skills

Sub-section: Cube Roots of Rational Numbers and Real-Life Skills

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Choose the correct answer.

1. Find the value of $\sqrt[3]{216}$.

   (understand, MA 1.1 G.8/2)

   A. 4

   B. 6

   C. 8

   D. 12

   Solution 6

   $\sqrt[3]{216} = \sqrt[3]{6 \times 6 \times 6} = 6$

2. Find the value of $\sqrt[3]{343}$.

   (understand, MA 1.1 G.8/2)

   A. 7

   B. 9

   C. 11

   D. 13

   Solution 7

   $\sqrt[3]{343} = \sqrt[3]{7 \times 7 \times 7} = 7$

3. Find the cube root of $-\frac{64}{1331}$.

   (understand, MA 1.1 G.8/2)

   A. $-\frac{8}{11}$

   B. $-\frac{6}{11}$

   C. $-\frac{4}{9}$

   D. $-\frac{4}{11}$

   Solution $-\frac{4}{11}$

   $\sqrt[3]{-\frac{64}{1331}} = \sqrt[3]{-\frac{4}{11} \times -\frac{4}{11} \times -\frac{4}{11}} = -\frac{4}{11}$

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4. Find the cube root of $-\frac{1000}{729}$.

   (understand, MA 1.1 G.8/2)

   A. $-\frac{10}{7}$

   B. $-\frac{10}{9}$

   C. $-\frac{10}{11}$

   D. $-\frac{10}{13}$

   Solution $-\frac{10}{9}$

   $\sqrt[3]{-\frac{1000}{729}} = \sqrt[3]{-\frac{10}{9} \times -\frac{10}{9} \times -\frac{10}{9}} = -\frac{10}{9}$

5. Find the value of $\sqrt[3]{1.728}$.

   (understand, MA 1.1 G.8/2)

   A. 0.8

   B. 1.2

   C. 1.4

   D. 1.6

   Solution 1.2

   $\sqrt[3]{1.728} = \sqrt[3]{1.2 \times 1.2 \times 1.2} = 1.2$

6. Find the value of $\sqrt[3]{0.512}$.

   (understand, MA 1.1 G.8/2)

   A. 0.06

   B. 0.08

   C. 0.6

   D. 0.8

   Solution 0.8

   $\sqrt[3]{0.512} = \sqrt[3]{0.8 \times 0.8 \times 0.8} = 0.8$

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7. A square coffee table has an area of 196 square inches. What is the length of one side of the coffee table?

   (apply, MA 1.1 G.8/2)

   A. 12 inches

   B. 14 inches

   C. 16 inches

   D. 18 inches

   Solution 14 inches

   Area of square = $side^2$

   196 = $side^2$

   side = 14 inches

8. Jessica wants to put a piece of carpet on the floor of her living room. The floor is a square with an area of 361 square feet. How long should the piece of carpet be on each side?

   (apply, MA 1.1 G.8/2)

   A. 17 feet

   B. 19 feet

   C. 21 feet

   D. 23 feet

   Solution 19 feet

   Area of square = $side^2$

   361 = $side^2$

   side = 19 inches