Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

**7.2B Finding Cube Roots\_Classwork**

*Objective: Evaluate cube roots of perfect cubes. Use cube roots to solve equations. (CCSS: 8.EE.2)*

HW: 7.2B Homework (handout)

**WARM UP**: USE THE FORMULAS TO FIND VOLUME AND SURFACE AREA OF CUBES.

Volume of a cube: V (cube) = s3 Surface area of a cube: S = 6s2 ( *s* is the side length of the cube)

|  |  |
| --- | --- |
| 1. Find the volume of a cube with a side length of 9 in.Image result for cube | 2. Find the surface area of a cube with a side length of  9 in.Image result for cube |
| 3. Find the cubed root.  $\sqrt[3]{3∙72}$  | 4. Find the cubed root $\sqrt[3]{4913}$ |

|  |  |  |
| --- | --- | --- |
| 5. Evaluate $\sqrt{\frac{72}{8}}$ | 6. Evaluate $\sqrt{\frac{36}{81}}$  | 7. Evaluate $-\sqrt{\frac{25}{100}}$ |

When you are finding length of a shape, the unit is: # in 🡪 5 in

When you are finding Surface Area of a shape, the unit is: # in2 🡪 5 in2

When you are findin Volume of a shape, the unit is: # in3 🡪 5 in3

**EXAMPLES**

|  |  |  |
| --- | --- | --- |
| 1. FIND THE LENGTH OF A CUBE  WITH A VOLUME OF 512,000 in3 | 2. FIND THE LENGTH OF A CUBE  WITH A SURFACE AREA OF  1350 cm2. | 3. Find the surface area of a cube with a volume of 343,000 mm3 |

**ON YOUR OWN: Use cube roots to solve problems**

|  |  |
| --- | --- |
| 1. Find the length of a cube with a volume of  125,000 in3 | 2. Find the length of a cube with surface area of 294 cm2. |
| 3. Find the surface area of a cube with a volume of 27 cubic feet. | 4. The volume of a music box shaped like a cube is  512 cubic centimeters. Find the surface area of  music box. |