

**MATH**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**STEP ONE**: Watch the video of Steve doing the **Happy Dance**. Pay attention to what solid shapes his arms, legs, body, and head are.

1. What part of Steve’s body is a cube?\_\_\_\_\_\_\_\_\_\_\_
2. What is the volume of that cube? \_\_\_\_\_\_\_\_\_ cubic units
3. What parts of Steve’s body are rectangular prisms? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What is the volume of Steve’s arms? \_\_\_\_\_\_\_cubic units
5. What is Steve’s **TOTAL** volume? \_\_\_\_\_\_\_ cubic units

**STEP TWO**: **MAKING STEVE’S HEAD FROM CUBES**

1. Steve’s head has grown. It now has a volume of 64 cubic units. Make Steve’s head!
2. What is the length, the width and the height of Steve’s head?\_\_\_\_\_\_\_ units.
3. How many faces are there on Steve’s head?\_\_\_\_\_\_
4. How many edges are there on Steve’s head?\_\_\_\_\_\_
5. What is the area of each face?\_\_\_\_\_\_ square units
6. What is the perimeter of each face?\_\_\_\_\_\_ units

**STEP THREE**: **MAKING STEVE’S CHEST FROM CUBES**

1. Steve’s chest has a new volume of 64 cubic units. Make Steve’s chest!
2. What is the length of Steve’s chest?\_\_\_\_ units
3. What is the width of Steve’s chest? \_\_\_\_ units
4. What is the height of Steve’s chest? \_\_\_\_ units
5. How many vertices are there on Steve’s chest?\_\_\_\_\_\_
6. What is the area of the biggest face?\_\_\_\_\_\_ square units
7. What is the perimeter of the smallest face?\_\_\_\_\_\_ units

**STEP FOUR**: **PUTTING IT ALL TOGETHER…TIME FOR SOME FORMULAS**

1. How many **congruent** **faces** are on Steve’s head? \_\_\_\_\_\_
2. What formula would we use to calculate the volume of Steve’s head?
3. What shape is Steve’s chest? \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What formula would we use to calculate the volume of Steve’s chest:
5. Which part of Steve’s body is a **regular solid**?\_\_\_\_\_\_\_\_\_\_\_

 **STEP FIVE: CHALLENGE TIME**

1. You are building a fort that has exactly 80 cubic units and is a **rectangular prism**. Design the fort and tell what its dimension are:

Length:\_\_\_\_ units Width: \_\_\_\_\_ units Height:\_\_\_\_\_\_units

1. You are building a fort that has exactly 125 cubic units and is a **regular solid**. Design the fort and tell what its dimension are:

Length:\_\_\_\_ units Width: \_\_\_\_\_ units Height:\_\_\_\_\_\_units