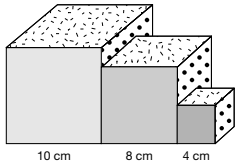
3. 1576 $cm^3$; $10^3 + 8^3 + 4^3$
4. 342 $in^3$; $6^3 + 5^3 + 1^3$
5. Possible response: The shape in Question 4. The boxes are a lot larger than those in Question 3.

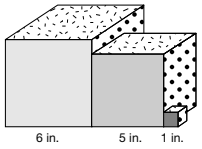
Name _____ Date _____

3. The figure is built from three cubes. Find the volume of the entire figure. Show your work and include unit.




Volume _____

4. Another figure is built from three cubes. Find the volume of the entire figure. Show your work and include units.




Volume _____

5. Look at the shapes in Questions 3 and 4. Which shape will hold more water? Explain your thinking.





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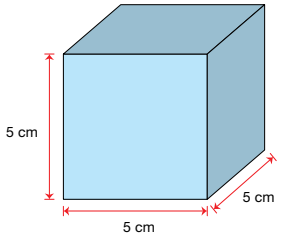
## Teacher Guide

### Confused Contessa Finds Volume (TG)

* Contessa is incorrect. To find the volume of a 5 cm cube, she incorrectly multiplies × 3, but that is not the same as 5 × 5 × 5.

**Confused Contessa Finds Volume**

Contessa is finding the volume of this cube.




Here is her thinking:

The width is 5 cm.
The height is 5 cm.
The length is 5 cm.
So the volume is 5 cm × 3 = 15 $cm^3$.

**Discuss Contess's solution with a partner. Do you agree with Contessa? Why or why not?**





*Teacher Guide*

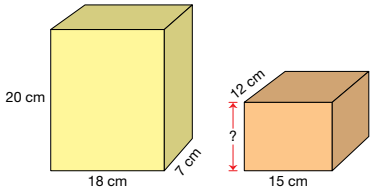


***Answers and/or discussion are included in the lesson.**

Name _____ Date _____

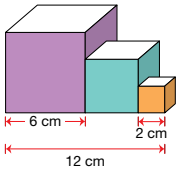
## Find the Volume

1. Both boxes have the same volume. Find the height of Box B. Show or tell how you solved the problem.




Height of Box B _____

2. The shape in the sketch is built from three cubes. Find the volume of the shape. Show or tell how you solved the problem.




Volume _____





*Teacher Guide* - Page 1

Name _____ Date _____

**Find the Volume Feedback Box**

| | Expectation | Check In | Comments |
|---|---|---|---|
| Solve multistep problems using addition, subtraction, multiplication, and division. | E7 | | |
| Use multiplication and division strategies to find the volume of boxes. | E9 | | |

| | Yes . . . | Yes, but . . . | No, but . . . | No. . . |
|---|---|---|---|---|
| **MPE1. Know the problem.** I read the problem carefully, I know the questions to answer and what information is important. | | | | |
| **MPE2. Find a strategy.** I choose good tools and an efficient strategy for solving the problem. | | | | |
| **MPE5. Show my work.** I show or tell how I arrived at my answer so someone else can understand my thinking. | | | | |
| **MPE6 Use labels.** I use labels to show what numbers mean. | | | | |





*Teacher Guide* - Page 2

### Find the Volume (TG p. 1–2)
### Questions 1–2

**1.*** 14 cm; Possible response: Both boxes have the same volume. Box A is 20 cm × 7 cm × 18 cm = 2520 $cm^3$. Box B has a length of 15 cm and a width of 12 cm. 15 cm × 12 cm = 180 $cm^2$. To find the height, I divided the volume, 2520 $cm^3$ by 180 $cm^2$ and got 14 cm.

**2.*** 288 $cm^3$; Possible response:

Volume of largest cube:
6 cm × 6 cm × 6 cm = 216 $cm^3$

Volume of smallest cube:
2 cm × 2 cm × 2 cm = 8 $cm^3$

To find the length of the medium cube:
12 cm – 6 cm – 2 cm = 4 cm

Volume of the medium cube:
4 cm × 4 cm × 4 cm = 64 $cm^3$

Volume of the shape:
216 $cm^3$ + 8 $cm^3$ + 64 $cm^3$ = 288 $cm^3$

***Answers and/or discussion are included in the lesson.**