

Student Activity Book

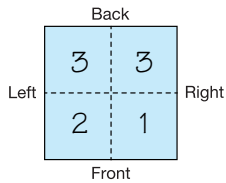
Building Problems (SAB p. 535)

Questions 1–2

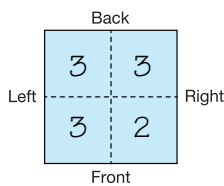
- For Questions A–C, buildings and building plans will vary but there should be at least 1 cube in each square.

Possible building plans for each:

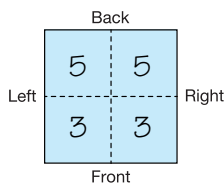
A.*



B.

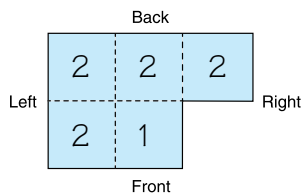


C.



- Buildings and floor plans will vary. There should be at least 1 cube in each square.

Possible building plan:



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

Name _____ Date _____

Building Problems

- Use the following floor plans to make a building and building plan with:
 - 9 cubes
- 11 cubes

- 16 cubes

- Use the following floor plan to make a building out of 9 cubes.

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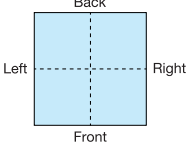
Name _____ Date _____

More Building Problems

Work with a partner. Construct a building that matches the clues in each problem. Make a record of your building in the building plan. You may find no solution, one solution, or many solutions.

1. Clues:

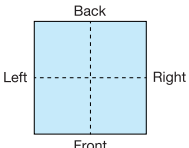
- The floor plan is a square with each side 2 units long.
- Volume = 8 cubic units
- Height = 2 units



Number sentence _____

2. Clues:

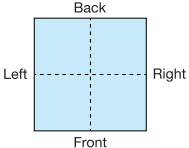
- The floor plan is a square with each side 2 units long.
- Volume = 6 cubic units
- Height = 2 units



Number sentence _____

3. Clues:

- The floor plan is a square with each side 2 units long.
- Volume = 9 cubic units
- Height = 2 units



Number sentence _____

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Name _____ Date _____

4. Clues:

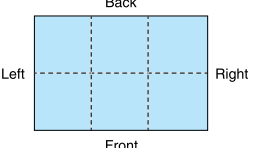
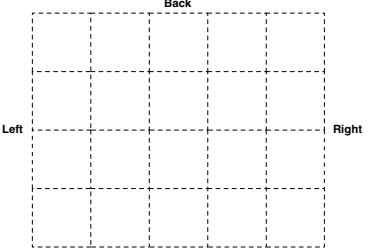
- The floor plan is a rectangle that is 3 units long from left to right and 2 units long from front to back.
- Volume = 14 cubic units
- Height = 4 units

Number sentence _____

5. Make up your own building problem. Make sure you know the answer. Remember to label the units.

Clues:

- The floor plan is a rectangle that is _____ units long from left to right and _____ units long from front to back.
- Volume = _____ • Height = _____

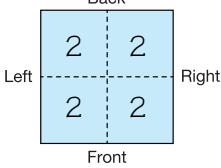



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More Building Problems (SAB pp. 537–538) Questions 1–5

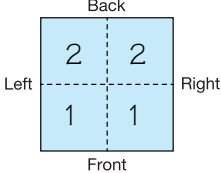
1.*



Possible number sentences:
 $2 + 2 + 2 + 2 = 8$
 $4 + 4 = 8$

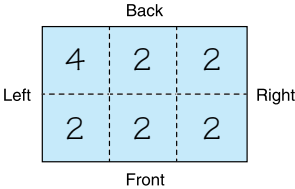
2.* Solutions will vary but could include:

Possible number sentences:
 $2 + 2 + 1 + 1 = 6$
 $3 + 3 = 6$



3.* There is no solution.

4.* Solutions will vary but could include:



Possible number sentences:
 $4 + 2 + 2 + 2 + 2 + 2 = 14$
 $6 + 4 + 4 = 14$
 $8 + 6 = 14$

5. Building problems will vary.

Possible response:



1 unit long from left to right and 4 units long from front to back.

Volume = 14 cubic units

Height = 5 units

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

Give Me a Clue (SAB pp. 539–540)

Questions 1–5

1.

Back	
4	1
Left	Right
1	1
Front	

Possible number sentence:
 $4 + 1 + 1 + 1 = 7$

2. Possible solution:

Back		
1	2	1
Left		Right
1		1
Front		

Possible number sentence:
 $1 + 1 + 2 + 1 + 1 = 6$

3.* Possible solution:

Back	
3	3
Left	Right
3	1
Front	

Possible number sentence:
 $3 + 3 + 3 + 1 = 10$

4. Possible solution:

Back	
3	2
Left	Right
3	2
Front	

Possible number sentence:
 $3 + 3 + 2 + 2 = 10$

5.* Possible solution:

Back		
4	3	3
Left		Right
3	2	2
Front		

Possible number sentence:
 $4 + 3 + 3 + 3 + 2 + 2 = 17$

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Name _____ Date _____

Give Me a Clue

Read the clues for each problem. Construct a building that solves each problem. Use the floor plan to record a building plan that solves the problem. Write a number sentence to fit each building.

1. Clues:

- The floor plan is a square with each side 2 units long.
- Volume = 7 cubic units
- Height = 4 units

Back	
Left	Right
Front	

Number sentence _____

2. Clues:

- The floor plan is shown at the right.
- Volume = 6 cubic units
- Height = 2 units

Back		
Left		Right
Front		

Number sentence _____

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Name _____ Date _____

3. Clues:

- The floor plan is a square with each side 2 units long.
- Volume = 10 cubic units
- Height = 3 units

Back	
Left	Right
Front	

Number sentence _____

4. There is more than one solution to Question 3. Show another solution.

Back	
Left	Right
Front	

Number sentence _____

5. Clues:

- The floor plan is shown at the right.
- Volume = 17 cubic units
- Height = 4 units

Back		
Left		Right
Front		

Number sentence _____

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

Name _____ Date _____

Building Challenge

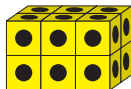
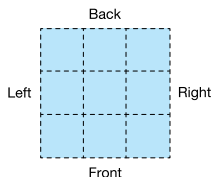


Dear Family Member:

Your child is learning to construct buildings with cubes and describe them using building plans. Ask your child how he or she recorded building plans in class. It will help if you imagine placing each building on the grid.

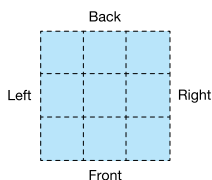
Thank you.

Make a building plan from the picture of the building. Draw an outline or floor plan. Fill in the height for each square on the floor plan. Write a number sentence for the volume.



Volume _____ cubic units
Number sentence _____

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Volume _____ cubic units
Number sentence _____

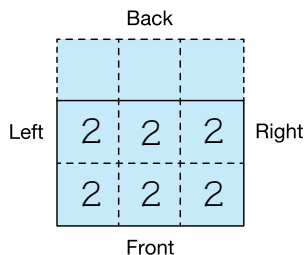
TG • Grade 2 • Unit 10 • Lesson 5

Homework Master

Teacher Guide

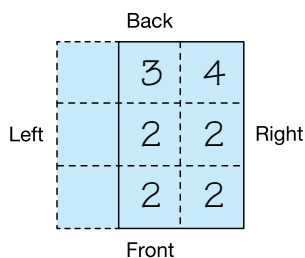
Teacher Guide

Building Challenge (TG) Homework



Volume 12 cubic units

Possible number sentence: $2 + 2 + 2 + 2 + 2 + 2 = 12$



Volume 15 cubic units

Possible number sentence: $2 + 2 + 3 + 2 + 2 + 4 = 15$

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