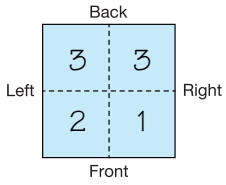
Student Activity Book

Building Problems (SAB p. 535)
Questions 1–2

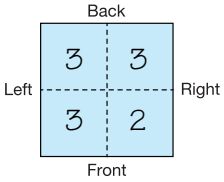
1. For Questions A–C, buildings and building plans will vary but there should be at least 1 cube in each square.

   Possible building plans for each:

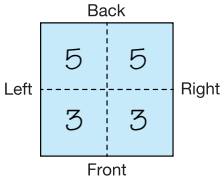
A.*



B.

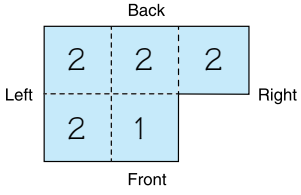


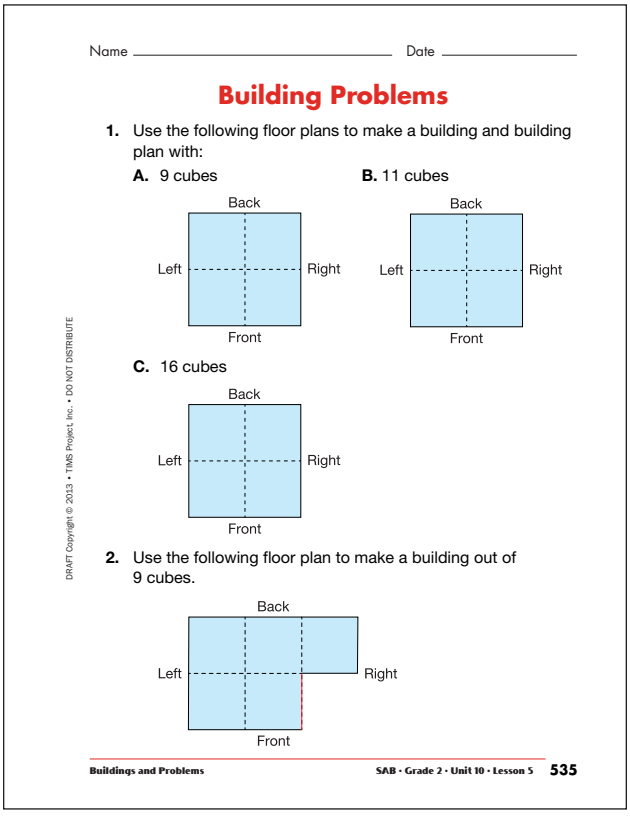
C.



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

   Possible building plan:





Name _____ Date _____

Building Problems

1. Use the following floor plans to make a building and building plan with:

A. 9 cubes

Back / Left / Right / Front

B. 11 cubes

Back / Left / Right / Front

C. 16 cubes

Back / Left / Right / Front

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

Back / Left / Right / Front

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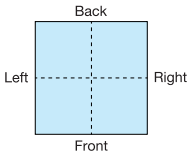
*Answers and/or discussion are included in the lesson.

Name _____ Date _____

More Building Problems

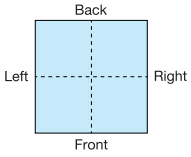
Work with a partner. Construct a building that matches the clues in each problem. Make a record of your building in the building plan. You may find no solution, one solution, or many solutions.

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



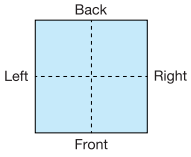
Number sentence _____

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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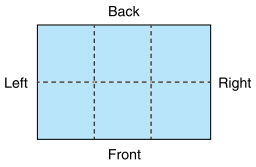
Name _____ Date _____

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.



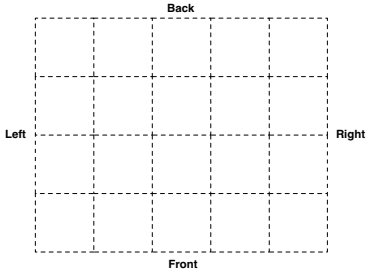
   - Volume = 14 cubic units
   - Height = 4 units

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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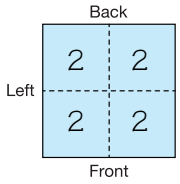
More Building Problems (SAB pp. 537–538)

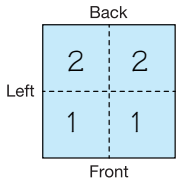
Questions 1–5

1.*



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

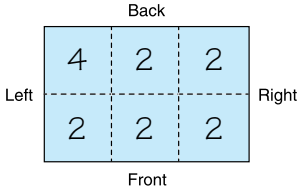
2.* Solutions will vary but could include:



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

3.* There is no solution.

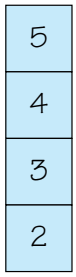
4.* Solutions will vary but could include:



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.

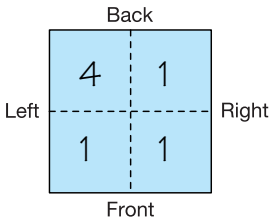
Volume = 14 cubic units

Height = 5 units

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

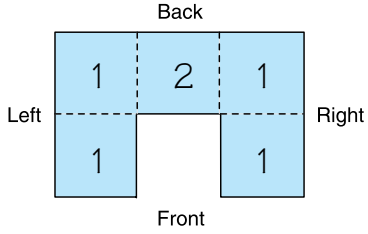
Give Me a Clue (SAB pp. 539–540)
Questions 1–5

1.



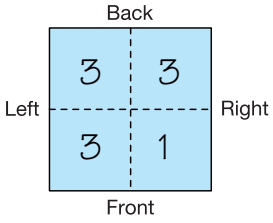
Possible number sentence:
$4 + 1 + 1 + 1 = 7$

2. Possible solution:



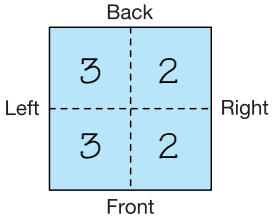
Possible number sentence:
$1 + 1 + 2 + 1 + 1 = 6$

3.* Possible solution:



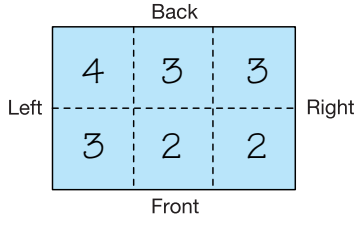
Possible number sentence:
$3 + 3 + 3 + 1 = 10$

4. Possible solution:

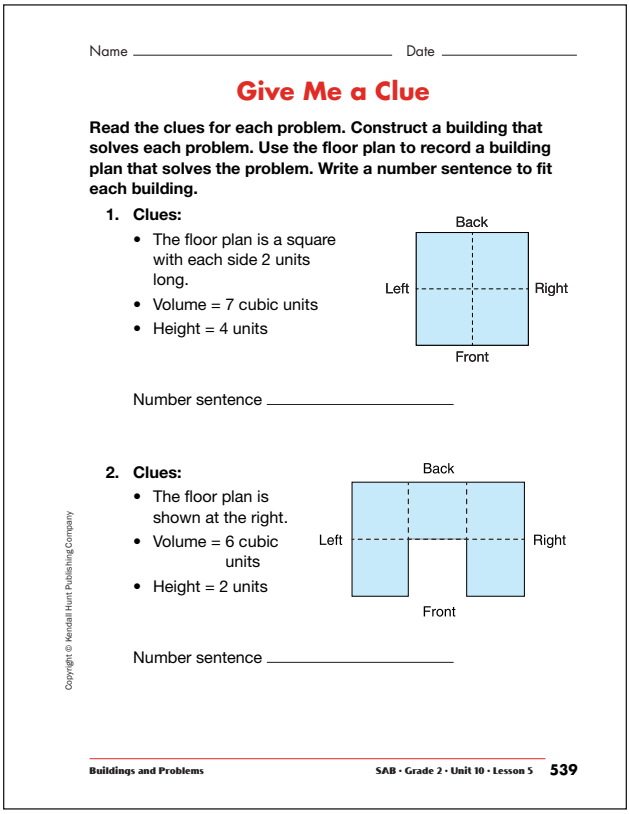


Possible number sentence:
$3 + 3 + 2 + 2 = 10$

5.* Possible solution:



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



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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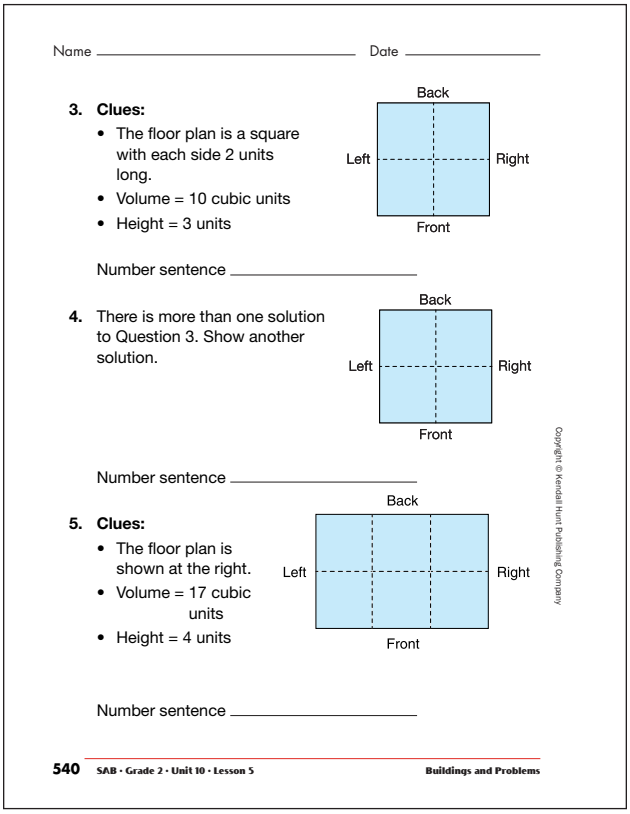

Name _____ Date _____

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.**