

Student Activity Book

**TIMS Towers (SAB pp. 435–438)
Questions 1–11**

1. **A.** 11 floors
B. 2 cubes
C.* 22 cubic units
- 2.* Possible responses: I grouped by floors. There are 2 cubes on each floor so I skip counted by 2s (2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22). I grouped the cubes by columns. There are 2 columns with 11 in each column. I doubled 11 to get 22 cubic units.
- 3.* Possible responses: $2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 22$; $11 + 11 = 22$;
 $10 + 10 + 2 = 22$; $10 + 10 + 1 + 1 = 22$
4. **A.** 9 floors
B. 6 cubes
C.* 54 cubic units
- 5.* Possible responses: Since there are 6 cubes on each floor, I divided each floor into $5 + 1$. First I skip counted by 5s for the 9 floors (5, 10, 15, 20, 25, 30, 35, 40, 45) and then I counted on for the left over cubes (46, 47, 48, 49, 50, 51, 52, 53, 54). I saw that there were 9 in each column and there are 6 columns. Since 9 is 1 less than 10 I thought about how many six 10s will be. It is 60. Then I counted back 6 to take away the extra cubes (59, 58, 57, 56, 55, 54).
- 6.* Possible response:
 $5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 9 = 54$

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Name _____ Date _____

TIMS Towers

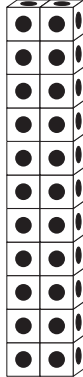
Tall Tower

Build a cube model of the Tall Tower. Use your model and the drawing to answer the questions. Include units.

1. **A.** How many floors are in the Tall Tower?

- B.** How many cubes are on each floor?

- C.** What is the volume of the Tall Tower?



Tall Tower

2. Show or tell how you grouped the cubes to find the volume.

3. Write a number sentence to show how you found the volume.

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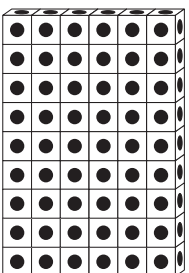
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Name _____ Date _____

Sky-High Tower

Build a cube model of Sky-High Tower. Use your model and the drawing to answer the questions. Include units.



Sky-High Tower

4. **A.** How many floors are in the Sky-High Tower?

- B.** How many cubes are on each floor?

- C.** What is the volume of the Sky-High Tower?

5. Show or tell how you grouped the cubes to find the volume.

6. Write a number sentence to show how you found the volume.

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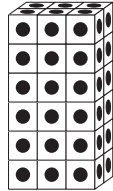
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*Answers and/or discussion are included in the lesson.

7. **A.*** 6 floors
B.* 6 cubes
C.* 36 cubic units
- 8.* Possible responses: I grouped the cubes by floors. There are 6 cubes on each floor and there are 6 floors. I used my calculator to add $6 + 6 + 6 + 6 + 6 + 6 = 36$. I counted 18 cubes on the front side of the building. I knew there were also 18 cubes on the back of the building, so I used my calculator to add $18 + 18 = 36$.
- 9.* Possible responses: $6 + 6 + 6 = 18$;
 $18 + 18 = 36$
10. **A.** 10 cubes
B. 5 floors
C. 50 cubic units
11. Possible response: John grouped the cubes by floor. There are 10 cubes on each floor and there are 5 floors, so he counted by 10s (10, 20, 30, 40, 50) to get 50 cubic units.

Name _____ Date _____

More Towers
 Build cube models of each building. Use your model to answer the questions. Include units.



Triple Double Tower

7. **A.** How many floors are in the Triple Double Tower?

B. How many cubes are on each floor?

C. What is the volume of the Triple Double Tower?

8. Show or tell how you grouped the cubes to find the volume.

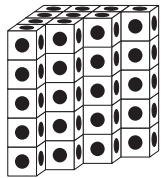
9. Write a number sentence to show how you found the volume.

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Name _____ Date _____



Sawtooth Tower

10. **A.** How many cubes are on each floor of the Sawtooth Tower?

B. How many floors are in the Sawtooth Tower?

C. What is the volume of the Sawtooth Tower?

11. John thinks the volume of Sawtooth Tower is 50 cubic units. He said he skip counted by tens. Show or tell John's strategy.

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

Name _____ Date _____

TIMS Radio Tower

Build a cube model of the TIMS Radio Tower. Use your model and the drawing to answer the questions. Include units.

TIMS Radio Tower

- How many floors are in the TIMS Radio Tower?

- What is the volume? _____
- Show or tell how you found the volume.

- Write a number sentence to show how you found the volume.

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Strategies to Find Volume SAB • Grade 1 • Unit 13 • Lesson 3 **439**

TIMS Radio Tower (SAB p. 439)

Questions 1–4

- 7 floors
- 48 cubic units
- Three possible responses: I grouped the cubes on the bottom of the building by columns. There are 8 columns with 5 cubes in each, so I counted by 5s (5, 10, 15, 20, 25, 30, 35, 40). There are 8 cubes on the top of the tower so I added $40 + 8 = 48$ cubic units. I counted the cubes on the front side of the building and got 24 cubes. I knew there were also 24 cubes on the back of the building so I used my calculator to add $24 + 24 = 48$ cubic units. I counted the cubes on the two short columns at the ends of the building. Each side had 10 cubes, so first I added $10 + 10 = 20$. Then I counted the cubes in the middle two columns. Each one had 14 cubes. I added $14 + 14 = 28$. Then I used the calculator to add $20 + 28 = 48$ cubic units.
- Possible response: $20 + 20 + 4 + 4 = 48$

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TIMS Radio Tower Feedback Box		Expectation	Check In	Comments
Solve problems involving volume using repeated addition and skip counting. [Q# 2–4]	Yes ...	E1		
Represent the volume of an object using symbols, connecting cubes, and number sentences. [Q# 2–4]	Yes, but ...	E2		
Measure and estimate volume by building models and counting cubic units. [Q# 2–3]	No, but ...	E3		
MIPSA: Show my work. I show or tell how I arrived at my answer so someone else can understand my thinking. [Q# 3–4]	Yes ...			
MIPSA: Use labels. I use labels to show what numbers mean. [Q# 1–3]	Yes, but ...			
	No, but ...			
	No ...			

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