Name _____ Date _____

City Buildings

1. Use cubes to make buildings that look like the three pictures below. Find the volume of each building and write a number sentence to show your strategy. Include units.

Building A

Building B

Volume _____   Volume _____

Number
sentence _____   Number
sentence _____

Building C   Volume _____

Number
sentence _____

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Name _____ Date _____

Match Up

2. Which building goes with which building plan? Draw a line from the plan to the matching building. Be ready to explain how you know.

Plan 1   Back

Left | 5 | 5 | Right
     | 5 | 5 |
Front

Building W

Plan 2   Back
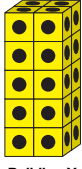
Left | 3 | 3 | 3 | 3 | 3 | Right
     | 3 | 3 | 3 | 3 | 3 |
     | 3 | 3 | 3 | 3 | 3 |
Front

Building X

Plan 3   Back

Left | 3 | 3 | 3 | Right
     | 3 | 3 | 3 |
     | 3 | 3 | 3 |
Front

Building Y

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Student Activity Book

City Buildings (SAB pp. 529–530)
Questions 1–2

1.* Building A: 40 cubic units
Possible number sentences:
$9 + 11 + 11 + 9 = 40$
$36 + 4 = 40$
$20 + 20 = 40$

Building B: 88 cubic units
Possible number sentences:
$16 + 16 + 16 + 16 + 16 + 8 = 88$
$8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 = 88$
$11 + 11 + 11 + 11 + 11 + 11 + 11 + 11 = 88$

Building C: 18 cubic units
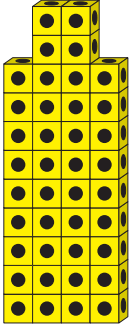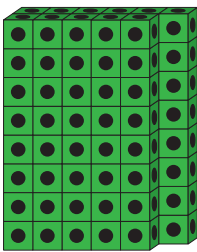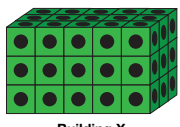Possible number sentences:
$10 + 6 + 2 = 18$
$5 + 5 + 3 + 3 + 1 + 1 = 18$
$2 + 4 + 6 + 4 + 2 = 18$

2. Plan 1, Building Y
Building Y is the only building with columns that are 5 units tall.

Plan 2, Building X
Building X from left to right is 5 units long and 3 units tall.

Plan 3, Building W
Building W is 3 units from left to right and 3 units tall.
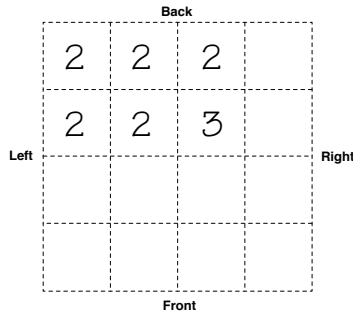
*Answers and/or discussion are included in the lesson.

Building Detective (SAB pp. 531–534)
Questions 1–3

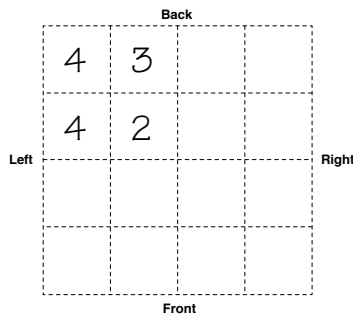1. A.* Buildings and building plans will vary.
    Possible building plan for Romesh's
    number sentence:

```
                Back
       ┌─────┬─────┬─────┬─────┐
       │  2  │  2  │  2  │     │
       ├─────┼─────┼─────┼─────┤
       │  2  │  2  │  3  │     │
 Left  ├─────┼─────┼─────┼─────┤  Right
       │     │     │     │     │
       ├─────┼─────┼─────┼─────┤
       │     │     │     │     │
       └─────┴─────┴─────┴─────┘
                Front
```

   B.* The tallest column in this plan is 3 units.

   C.* $2 + 2 + 2 + 2 + 2 + 3 = 13$ cubic units

2. A.* Responses will vary. Possible building plan
    with same volume as Romesh's building:

```
                Back
       ┌─────┬─────┬─────┬─────┐
       │  4  │  3  │     │     │
       ├─────┼─────┼─────┼─────┤
       │  4  │  2  │     │     │
 Left  ├─────┼─────┼─────┼─────┤  Right
       │     │     │     │     │
       ├─────┼─────┼─────┼─────┤
       │     │     │     │     │
       └─────┴─────┴─────┴─────┘
                Front
```

   B.* $4 + 4 + 3 + 2 = 13$ cubic units

Name _____ Date _____

Building Detective

1. A. Construct a building and draw a building plan that
    matches Romesh's number sentence.

    Building Plan for Romesh's Building
    Back

    Left _____ Right

    Front
    $6 + 6 + 1 = 13$ cubic units

    B. Height of tallest column _____

    C. Volume _____

    Remember to label your units.

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Name _____ Date _____

2. A. Construct a different building with the same volume as
    Romesh's building. Draw your building plan.

    Building Plan for My Building
    Back

    Left _____ Right

    Front

    B. Write a number sentence for your building.

    Number sentence _____

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

3. A. Romesh used 13 cubes to make this building plan. He forgot to fill in one part of the plan. Find the missing number. Write a number sentence.

2	4	1
1	?	2

Number sentence _____

B. Show or tell how you found the missing number.

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3. A. Missing number is 3; Number sentences will vary. Possible number sentence: $2 + 4 + 1 + 1 + 3 + 2 = 13$ cubic units

B. Possible response: I know the volume is 13 cubic units, so I started with 13 and subtracted the values that were listed on the building plan. $13 - 2 = 11$; $11 - 4 = 7$; $7 - 1 = 6$; $6 - 1 = 5$; $5 - 2 = 3$, so I know that 3 is the missing value.
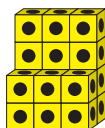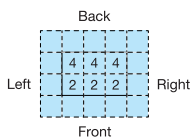

Name _____　Date _____

Match Up

Homework

Match each building plan with the picture of the building and connect them with a line. Then tell what number sentence goes with each Building Plan.
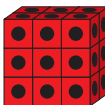
Back
3	3	3
3	3	3

Left　　Right
Front
Building Plan 1　　**Chair Building**

Back
4	4	4
2	2	2

Left　　Right
Front
Building Plan 2　　**Box Building**

$3 + 3 + 3 + 3 + 3 + 3 = 18$
Building Plan _____

$2 + 2 + 2 + 4 + 4 + 4 = 18$
Building Plan _____
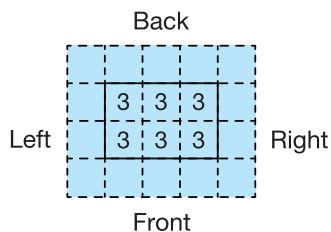
Homework Master　　　　TG · Grade 2 · Unit 10 · Lesson 4

Teacher Guide

Teacher Guide

Match Up (TG)
Homework

Back
3	3	3
3	3	3

Left　　Right
Front
Building Plan 1　　**Box Building**

$3 + 3 + 3 + 3 + 3 + 3 = 18$
Building Plan _1_

Back
4	4	4
2	2	2
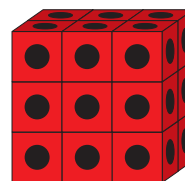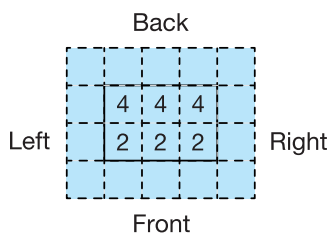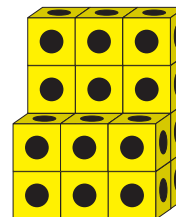
Left　　Right
Front
Building Plan 2　　**Chair Building**

$2 + 2 + 2 + 4 + 4 + 4 = 18$
Building Plan _2_