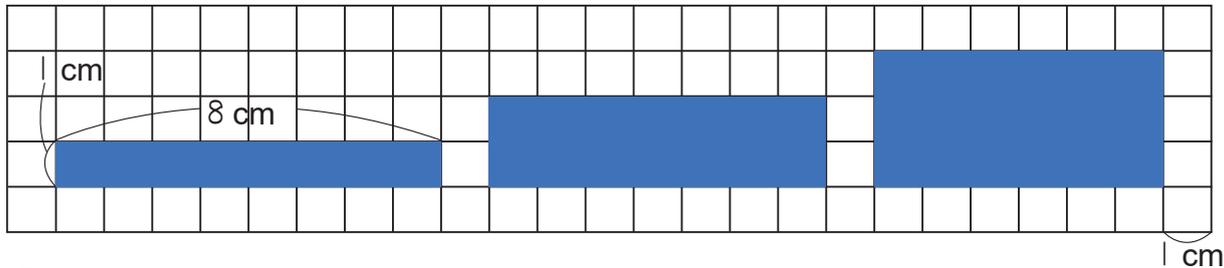## 12 - 1 Change Log

Change Log (1)

Example 1 Draw various rectangles with a perimeter of 18 cm.

1 cm
8 cm
1 cm

① Summarize the relationship between Length and width in the table.

There are two lengths and two width, so...

Length	1	2	3	4	5	6	7	8
Width	8	7	6	5	4	3	2	1

② If the length increase by 1 cm, how does the width change?

Decrease by 1 cm
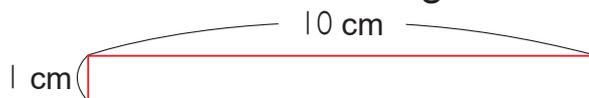
③ Looking at the table, let's make a math sentence where the length is ○ cm and the width is □ .

$○ + □ = 9$

④ If the length is 6 cm, what is the width?

3 cm

Make a rectangle using a piece of string 22 cm long. Find the length and the width of the rectangle.

10 cm
1 cm

① Summarize the relationship between the length and width in the table.

Length	1	2	3	4	5	6	7	···
Width	10							···

② If the vertical length increases by 1 cm, how does the width change?

③ Looking at the table, let's make a math sentence where the Length is ○ cm and the Width is □.

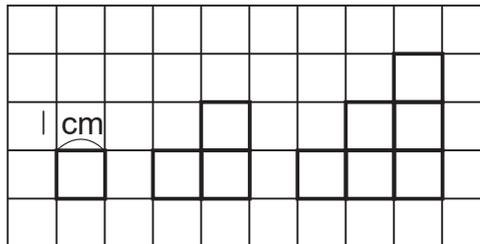④ If the length is 9 cm, what is the width?

124

12-2 Change Log

Change Log (2)

Example Arrange the squares in the staircase and measure the perimeter.

| cm

1 Summarize the relationship between the number of steps and the perimeter in the table.

Number of Steps	1	2	3	4	5	6	7	...
Perimeter	4	8	12	16	20	24	28	...

2 Let's make an math sentence with ○ for the number of steps and □ for the length of the perimeter.

$4 \times ○ = □$

3 What is the perimeter of 7 steps?

28 cm

4 How many steps are there when the perimeter of the steps is 32 cm?

8 steps

Arrange the equilateral triangle in a staircase and measure perimeter.

| cm

1 Summarize the relationship between the number of steps and the perimeter in the table.

Number of Steps	1	2	3	4	5	6	7	...
Perimeter	3							...

2 Let's make an math sentence with ○ for the number of steps and □ for the perimeter.

3 What is the perimeter of 8 steps?

4 How many steps are there when the perimeter of the steps is 30 cm?

125

12 - 3

Change Log

Change Log (3)

Example   A student walk 30 m per minutes.

1   Summarize the relationship between the minutes and the distance in the table below.

Minutes	0	1	2	3	4	5	⋯
Distance (m)	0	30	60	90	120	150	⋯

1   How many m does student walk in a minute?
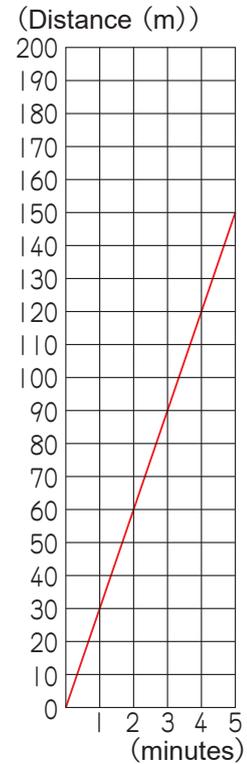
> 30 m

2   Look at the table and draw a graph.

3   If 6 minutes passed, how much will the student go?

> 180 m

4   If the student walked 360 m, how many minutes does it take?

> 12 minutes

(Distance (m))

Measure the time it takes to fill a bucket with water.

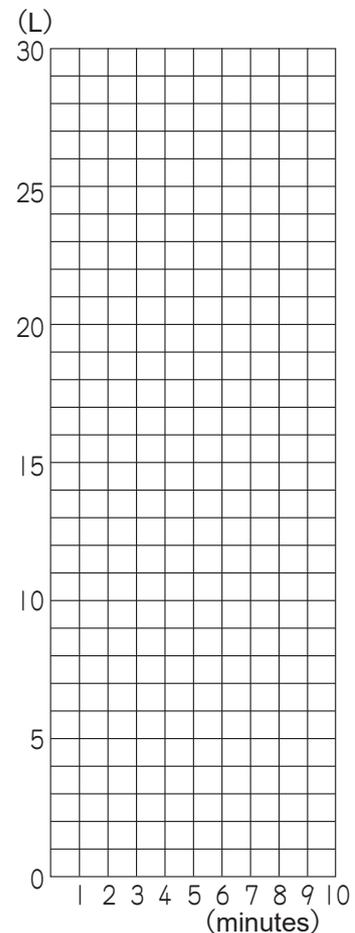**1**   Summarize the relationship between the amount of water and the minutes needed in the table below.

Minutes	0	1	2	3	4	5	6	⋯
Amount of water (L)	0	5						⋯

2   How much water will fill up in one minute?

3   Look at the table and draw a graph.

4   How much water will be collected in 7 minutes?

5   How many minutes does it take to collect 50 liters of water?

(L)

126

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12 - 4 Change Log Review

1 Summarize the relationship between the length and the width of rectangle or square with perimeter of 20 cm in the table.

Length	1	2	3	4	5	6	7	⋯
Width	9							⋯

① If the length is 9 cm, what is the width?

② If the width is 2 cm, what is the length?

2 The hot spring gush 12 L per minutes. Write the relationship between the minutes and amount of water.

※ Gush means that water comes out of the ground.

Minutes	0	1	2	3	4	5	6	⋯
Amount of water (L)	0	12						⋯

① Look at the table and draw a graph.

② How much water gush in one minute?

③ Let's make an math sentence with ◯ for the hours and ☐ for the amount of water.

④ How much water will be gushed in 7 minutes?

⑤ How many minutes does it take to gush 132 litters of water?

Amount of water (L)

60
58
56
54
52
50
48
46
44
42
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
　1　2　3　4　5
　(minutes)

127