MATH

# Converting metric units of length

Name _____ Date _____

I can convert millimeters, centimeters, meters and kilometers.

## 1 How it works

Metric units grow by tens. A centimeter is 10 millimeters, a meter is 100 centimeters and a kilometer is 1,000 meters. To change to a smaller unit, multiply by 10, 100 or 1,000. For example, 3 meters = 3 × 100 = 300 centimeters.

**Remember**

**1 centimeter = 10 millimeters**

**1 meter = 100 centimeters**

**1 kilometer = 1,000 meters**

**1 meter = 1,000 millimeters**

## 2 Convert

Big unit to small unit: multiply. Small to big: divide.

1. **8 kilometers = ☐ meters**
2. **5 meters = ☐ millimeters**
3. **5 kilometers = ☐ meters**
4. **1,000 centimeters = ☐ meters**
5. **12 centimeters = ☐ millimeters**
6. **100 millimeters = ☐ centimeters**
7. **4 meters = ☐ centimeters**
8. **11 centimeters = ☐ millimeters**
9. **9 meters = ☐ millimeters**
10. **5 meters = ☐ centimeters**

**How did I do?** ☆ ☆ ☆

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# Tables and mixed units

Name _____ Date _____

I can complete a conversion table and change mixed units.

## 1 Complete the tables

Look for the pattern down each column.

1 centimeter = 10 millimeters

| centimeters | millimeters |
|---|---|
| 1 | 10 |
| 2 | |
| 3 | |
| 4 | |
| 5 | |

1 meter = 100 centimeters

| meters | centimeters |
|---|---|
| 1 | 100 |
| | 200 |
| 3 | |
| | 400 |
| | 500 |

## 2 Change to the smaller unit

Change the big unit, then add the rest.

1. 7 centimeters 4 millimeters = ____ millimeters
2. 5 meters 26 centimeters = ____ centimeters
3. 4 kilometers 150 meters = ____ meters
4. 1 meter 850 millimeters = ____ millimeters
5. 1 centimeter 1 millimeter = ____ millimeters
6. 1 meter 38 centimeters = ____ centimeters

How did I do? ☆ ☆ ☆

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# Compare and regroup

Name _____ Date _____

I can compare measurements and change to bigger units.

## 1 Write >, < or = in the circle

Change to the same unit first.

1. 3 centimeters ◯ 31 millimeters
2. 5 kilometers ◯ 4,300 meters
3. 5 kilometers ◯ 4,400 meters
4. 8 meters ◯ 7,600 millimeters
5. 8 meters ◯ 750 centimeters
6. 1 meter ◯ 1,500 millimeters

## 2 Change to the bigger unit

How many whole big units? What is left over?

1. 4,850 meters = ☐ kilometers ☐ meters
2. 1,750 millimeters = ☐ meters ☐ millimeters
3. 85 millimeters = ☐ centimeters ☐ millimeters
4. 670 centimeters = ☐ meters ☐ centimeters

## 3 Think about it

1. How many centimeters are in half a meter? ☐
2. Which is longer, 900 meters or 1 kilometer? ☐
3. Why are metric changes so easy? ☐

**How did I do?** ☆ ☆ ☆

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# Word problems

Name _____ Date _____

**I can solve measurement problems by changing units.**

## 1 Read, convert, solve

Show your work in the box. Write the unit in your answer.

**1** A pencil is 18 centimeters long. How many millimeters long is it?

**Answer:**

**2** Sam runs 3 kilometers. Sara runs 2,800 meters. Who runs farther, and by how many meters?

**Answer:**

**3** A board is 2 meters long. Sam cuts off 75 centimeters. How long is the board now?

**Answer:**

**4** Each of your steps is 50 centimeters long. How many steps do you take to walk 10 meters?

**Answer:**

**How did I do?** ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

# Answer key: converting metric units of length

## 1 Page 1

Convert: 1) 8,000 meters; 2) 5,000 millimeters; 3) 5,000 meters; 4) 10 meters; 5) 120 millimeters; 6) 10 centimeters; 7) 400 centimeters; 8) 110 millimeters; 9) 9,000 millimeters; 10) 500 centimeters.

## 2 Page 2

Table 1) 20, 30, 40, 50

Table 2) 2, 300, 4, 5

Smaller unit: 1) 74 millimeters; 2) 526 centimeters; 3) 4,150 meters; 4) 1,850 millimeters; 5) 11 millimeters; 6) 138 centimeters.

## 3 Page 3

Compare: 1) <; 2) >; 3) >; 4) >; 5) >; 6) <.

Bigger unit: 1) 4 kilometers 850 meters; 2) 1 meter 750 millimeters; 3) 8 centimeters 5 millimeters; 4) 6 meters 70 centimeters.

Think: 1) 50 centimeters; 2) 1 kilometer; 3) You only × or ÷ by 10, 100 or 1,000.

## 4 Page 4: word problems

1) 18 × 10 = 180 millimeters

2) Sam: 3,000 − 2,800 = 200 meters farther

3) 200 − 75 = 125 centimeters (1 meter 25 centimeters)

4) 10 × 100 = 1,000; 1,000 ÷ 50 = 20 steps

## 5 Teaching tip

Point out the prefixes: kilo means 1,000 and centi means one hundredth. Once children know the prefixes, they can work out any metric change without memorizing.