MATH

Converting metric units of mass and capacity



Name _____ Date _____

I can convert grams and kilograms, and milliliters and liters.

1 How it works

A kilogram is 1,000 grams and a liter is 1,000 milliliters. To change kilograms to grams, or liters to milliliters, multiply by 1,000: 4 kilograms = 4,000 grams. To change grams to kilograms, divide by 1,000. 2,500 grams is 2 kilograms 500 grams.

Remember

1 kilogram = 1,000 grams

1 liter = 1,000 milliliters

2 Convert

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

1. 3 kilograms = ____ grams
2. 8 kilograms = ____ grams
3. 2 kilograms = ____ grams
4. 3,000 milliliters = ____ liters
5. 5 kilograms = ____ grams
6. 9 kilograms = ____ grams
7. 9 liters = ____ milliliters
8. 4 liters = ____ milliliters
9. 8 liters = ____ milliliters
10. 7,000 grams = ____ kilograms

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 liter = 1,000 milliliters

liters	milliliters
1	1,000
2	
3	
4	
5	

1 kilogram = 1,000 grams

kilograms	grams
1	1,000
	2,000
3	
	4,000
	5,000

2 Change to the smaller unit

Change the big unit, then add the rest.

1. 3 kilograms 350 grams = ☐ grams
2. 1 liter 850 milliliters = ☐ milliliters
3. 5 kilograms 600 grams = ☐ grams
4. 6 liters 550 milliliters = ☐ milliliters
5. 5 kilograms 400 grams = ☐ grams
6. 5 liters 100 milliliters = ☐ milliliters

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. 7 liters ◯ 6,600 milliliters
2. 3 kilograms ◯ 3,000 grams
3. 1 kilogram ◯ 800 grams
4. 3 liters ◯ 3,700 milliliters
5. 1 liter ◯ 1,000 milliliters
6. 7 kilograms ◯ 6,900 grams

2 Change to the bigger unit

How many whole big units? What is left over?

1. 6,950 grams = ____ kilograms ____ grams
2. 2,950 milliliters = ____ liters ____ milliliters
3. 4,800 grams = ____ kilograms ____ grams
4. 5,650 milliliters = ____ liters ____ milliliters

3 Think about it

1. How many grams are in half a kilogram?
2. Which is more, 1,200 mL or 1 liter?
3. Would you weigh a feather in grams or kilograms?

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 bag of rice weighs 5 kilograms. How many grams is that?

Answer: _____

2 A bottle holds 2 liters of juice. Aisha pours 4 glasses of 250 milliliters each. How much juice is left?

Answer: _____

3 A melon weighs 1 kilogram 400 grams. An apple weighs 200 grams. How many grams do they weigh together?

Answer: _____

4 Omar drinks 500 milliliters of water 3 times a day. How many liters and milliliters is that?

Answer: _____

How did I do?

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FOR TEACHERS AND PARENTS

Answer key: converting metric units of mass and capacity

1 Page 1

Convert: 1) 3,000 grams; 2) 8,000 grams; 3) 2,000 grams; 4) 3 liters; 5) 5,000 grams; 6) 9,000 grams; 7) 9,000 milliliters; 8) 4,000 milliliters; 9) 8,000 milliliters; 10) 7 kilograms.

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Table 1) 2,000, 3,000, 4,000, 5,000

Table 2) 2, 3,000, 4, 5

Smaller unit: 1) 3,350 grams; 2) 1,850 milliliters; 3) 5,600 grams; 4) 6,550 milliliters; 5) 5,400 grams; 6) 5,100 milliliters.

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

Bigger unit: 1) 6 kilograms 950 grams; 2) 2 liters 950 milliliters; 3) 4 kilograms 800 grams; 4) 5 liters 650 milliliters.

Think: 1) 500 grams; 2) 1,200 mL; 3) Grams.

4 Page 4: word problems

1) 5 × 1,000 = 5,000 grams

2) 2,000 − 4 × 250 = 1,000 milliliters (1 liter)

3) 1,400 + 200 = 1,600 grams

4) 3 × 500 = 1,500 milliliters = 1 liter 500 milliliters

5 Teaching tip 💡

A liter bottle of water weighs about 1 kilogram. Let children hold one, then a 250 milliliter cup, so the numbers connect to something they can feel.

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