



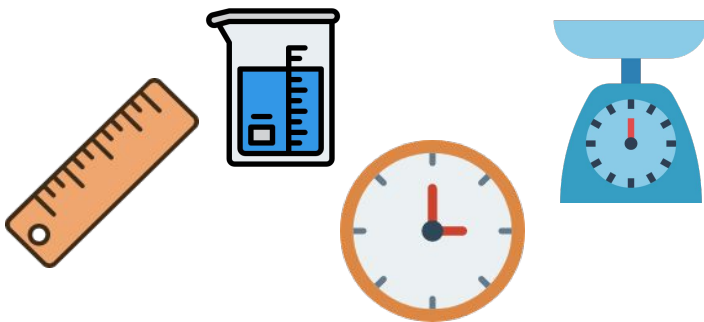
Helping With Math

Converting Units of Measurement

GRADE 4



Unit of Measurement is defined as a quantity used in a standard of measurement. In other words, it is classified as a unit with any measurement that there is 1 of.



Hi! The instruments you see on the left are used to convert units of measurement



CONVERSION OF MEASUREMENT

- ❑ It is the changes made between different units of measurement for the same quantity



CONVERTING UNITS OF MEASUREMENT

LET US RECALL



LENGTH



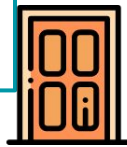
- It is the term used for identifying the size of an object or distance from one point to another

- It is a measure of how much matter is in an object

MASS



VOLUME



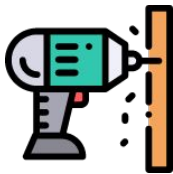
- It is the amount of space occupied by a liquid at rest or at their containers

- It is the ongoing sequence of events taking place : past, present, and future

TIME



CONCEPTS



MEASUREMENT CONVERSION CHART



LENGTH



METRIC

1 kilometer = 1, 000 meters
1 meter = 100 centimeters
1 meter = 1,000 millimeters
1 centimeter = 10 millimeters

CUSTOMARY

1 mile = 5, 280 feet
1 mile = 1, 760 miles
1 yard = 3 feet
1 foot = 12 inches



CAPACITY



METRIC

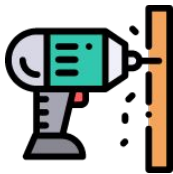
1 liter = 1, 000 milliliters

CUSTOMARY

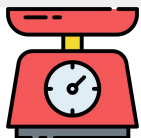
1 gallon = 4 quarts
1 quart = 2 pints
1 pint = 2 cups
1 cup = 8 fluid ounces



CONCEPTS



MEASUREMENT CONVERSION CHART



MASS AND WEIGHT



METRIC

1 kilogram = 1,000 grams
1 gram = 1,000 milligrams

CUSTOMARY

1 ton = 2,000 pounds
1 pound = 16 ounces

TIME



1 year = 365 days
1 year = 52 weeks
1 year = 12 months
1 week = 7 days
1 day = 24 hours
1 hour = 60 minutes
1 minute = 60 seconds



HOW TO CONVERT?

LARGER UNITS TO SMALLER UNITS

- ★ Check first the number of smaller units needed to make 1 larger unit
- ★ Multiply that number by the number of larger units



SMALLER UNITS TO LARGER UNITS

- ★ To convert a smaller unit to a larger unit (eg. cm to m), divide it by the number of smaller units which are needed to make 1 larger unit



EXAMPLES / EXERCISE



Convert the following measurement to its desirable units.

- 1) 36 inches = 3 feet
- 2) 45 yards = 1, 620 inches
- 3) 25 cm = _____ meters
- 4) 100 km = _____ meters

SOLUTIONS:



- 1) Converting inches to feet means we want to make a small unit to a larger unit. So the operation to be used is division.

Remember: 12 inches is equal to 1 foot. Thus:

$$36 \div 12 = 3 \longrightarrow \underline{36 \text{ in.} = 3 \text{ ft.}}$$

SOLUTIONS:



- 2) Converting yards to inches means we want to make a large unit to a smaller unit. So the operation to be used is multiplication.

Remember: 1 yard = 36 inches. Thus:

$$45 \times 36 = 1, 620 \longrightarrow \underline{45 \text{ yd} = 1, 620 \text{ in.}}$$



CONCEPTS

EXAMPLES / EXERCISE



Convert the following measurements to its desirable units.

- 1) 36 inches = 3 feet
- 2) 45 yards = 1,620 inches
- 3) 25 cm = _____ meters
- 4) 100 km = _____ meters

SOLUTIONS:



3)

SOLUTIONS:



4)



EXAMPLES / EXERCISE



Convert the following measurement to its desirable units.

- 5) 4.4 liters = 4,400 milliliters
- 6) 5,000 milliliters = 5 liters
- 7) 8 hours = _____ minutes
- 8) 1 month = _____ weeks

SOLUTIONS:



5) Converting liters to milliliters means we want to make a large unit to a smaller unit. So the operation to be used is multiplication.

Remember: 1 liter is equal to 1,000 milliliters. Thus:

$$4.4 \times 1,000 = 4,400 \rightarrow \underline{4.4 \text{ L} = 4,400 \text{ mL}}$$

SOLUTIONS:



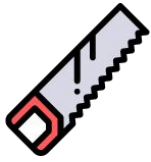
6) Converting milliliters to liters means we want to make a small unit to a larger unit. So the operation to be used is division.

Remember: 1,000 milliliters is equal to 1 liter . Thus:

$$5,000 \div 1,000 = 5 \rightarrow \underline{5,000 \text{ mL} = 5 \text{ L}}$$



EXAMPLES / EXERCISE



Convert the following measurement to its desirable units.

- 5) 4.4 liters = 4,400 milliliters
- 6) 5,000 milliliters = 5 liters
- 7) 8 hours = _____ minutes
- 8) 1 month = _____ weeks

SOLUTIONS:



7)

SOLUTIONS:



8)



TABLE OF ACTIVITIES

1. House Measurement
2. The Mansion's Chart Completion
3. Mr. Jone's Chart
4. Building Shelters
5. My Customary Houses
6. House Liter Test
7. House Grocery
8. The Right Time
9. House Problems
10. House Learnings



HOUSE MEASUREMENT

Help Mr. Jones and his team measure 4 different houses! Draw a line to connect the concepts with their corresponding description.

LENGTH

1.



It is the amount of space occupied by a liquid at rest or at their containers

A



MASS

2.



It is the ongoing sequence of events taking place : past, present, and future

B



VOLUME

3.



It is the term used for identifying the size of an object or distance from one point to another

C



TIME

4.



It is a measure of how much matter is in an object

D



THE MANSION'S CHART COMPLETION

Oh no, there are missing parts in the conversion chart! Fill in the missing information to complete the measurement conversion chart.



LENGTH



METRIC

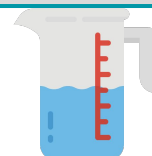
1 kilometer = 1.
2. = 100 centimeters
3. = 1,000 millimeters
1 centimeter = 4.

CUSTOMARY

5. = 5,280 feet
1 mile = 6.
1 yard = 7.
8. = 12 inches



CAPACITY



METRIC

1 liter = 9.

CUSTOMARY

10. = 4 quarts
1 quart = 11.
1 pint = 12.
13. = 8 fluid ounces



MR. JONES' CHART

Help Mr. Jones complete his conversion chart! Answer the following questions to complete the metric conversion.

MASS AND WEIGHT

METRIC

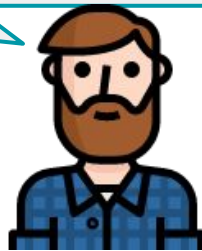
1 kilogram = 1.

1 gram = 2.

CUSTOMARY

3. = 2,000 pounds

4. = 16 ounces



1 year = 5.

6. = 52 weeks

7. = 12 months

1 week = 8.

9. = 24 hours

1 hour = 10.

11. = 60 seconds

TIME



BUILDING SHELTERS

Name all tools and materials needed to build the shelter! Answer the following questions to complete the metric conversion.



4.



900 cm = ____ m

3.



35 m = ____ cm

2.



50 m = ____ km



1.



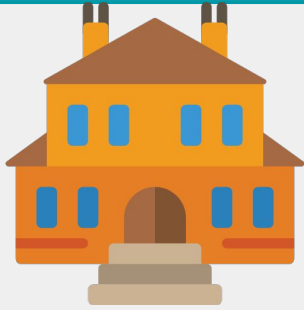
7 m = ____ cm



MY CUSTOMARY HOUSES

Here are some of Gab's house project designs. Answer the following length questions to complete the conversion.

1.



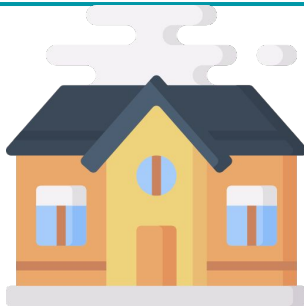
$$2 \text{ ft} = \underline{\hspace{2cm}} \text{ in}$$

2.



$$5 \text{ yd} = \underline{\hspace{2cm}} \text{ ft}$$

3.



$$27 \text{ ft} = \underline{\hspace{2cm}} \text{ yd}$$

4.



$$3 \text{ mi} = \underline{\hspace{2cm}} \text{ yd}$$



5.



$$198 \text{ in} = \underline{\hspace{2cm}} \text{ ft}$$

6.



$$8,800 \text{ yd} = \underline{\hspace{2cm}} \text{ mi}$$



HOUSE POOL TEST

It's time to test the pool! Convert the following to complete the statement. Write your solution and answer on the space provided.



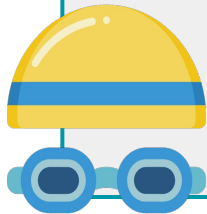
1.

$$15 \text{ L} = ? \text{ mL}$$



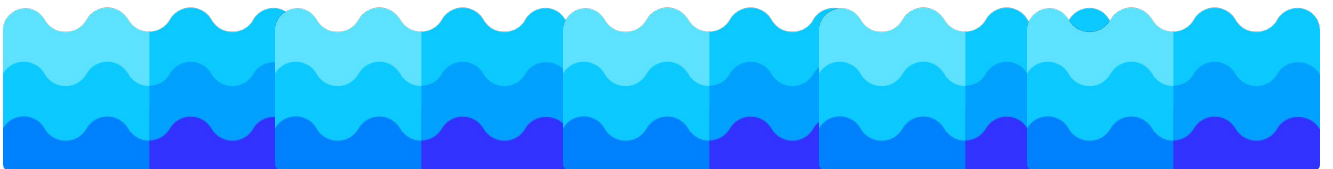
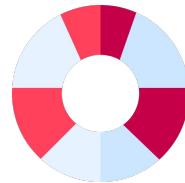
2.

$$54 \text{ L} = ? \text{ mL}$$



3.

$$3,000 \text{ mL} = ? \text{ L}$$



HOUSE GROCERY

Jane did a grocery for her new home. Write the weights after examining the pictures carefully on her list. The first one is done for you as your guide.



6 bars of chocolate

$$6 \times 50 \text{ g} = 300 \text{ g}$$

1.

2 bottles of milk

2.

3 bottles of honey

3.

4 packets of flour

4.

2 bottles of salt



THE RIGHT TIME

Here comes the right time to build the house of Grace! Convert the following unit of time to complete the statement.



YEAR 2020

1. 12 hours = _____ days

2. 60 months = _____ years

3. 3 days = _____ hours

4. 4 weeks = _____ days

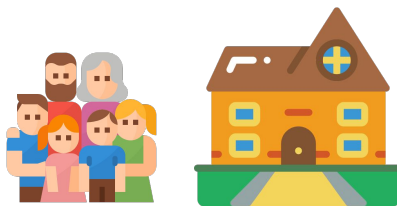
5. 1 day = _____ minutes

6. 8 years = _____ months



HOUSE PROBLEMS

Here are some scenarios at the house of the Smith family. Write your solution and answer on the space provided.

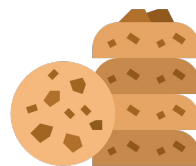


A small bottle of milk contains 12 oz of liquid. 14 bottles of milk are poured into a huge mixing bowl. How much milk (measured in pints) is in the bowl?



1.

Harold Smith wants to bake some cookies for his girlfriend. The recipe says he would need 7 oz. of flour for 1 batch of cookies. He wants to bake 4 batches of cookies. How much flour does he need?



2.

Luis Smith was 4 ft 11 in. tall last year. He grew 6 inches in the past year. How tall is he now?



3.



HOUSE LEARNINGS

The house construction is finally finished! Simply answer the questions below.

What is the importance of learning the conversion of different units of measurement?



1.

Is the topic easily be understandable? How did you say so?

2.



ANSWER GUIDE

Activity 1

1. C
2. D
3. A
4. B

Activity 2

- | | | |
|-------------------|----------------------|-------------|
| 1. 1, 000 meters | 6. 1, 760 miles | 11. 2 pints |
| 2. 1 meter | 7. 3 feet | 12. 2 cups |
| 3. 1 meter | 8. 1 foot | 13. 1 cup |
| 4. 10 millimeters | 9. 1,000 milliliters | |
| 5. 1 mile | 10. 1 gallon | |

Activity 3

- | | | |
|----------------------|----------------|--------------|
| 1. 1, 000 grams | 6. 1 year | 11. 1 minute |
| 2. 1, 000 milligrams | 7. 1 year | |
| 3. 1 ton | 8. 7 days | |
| 4. 1 pound | 9. 1 day | |
| 5. 365 days | 10. 60 minutes | |

Activity 4

1. 700
2. 0.05
3. 3, 500
4. 9



ANSWER GUIDE

Activity 5

- | | |
|-------|-----------|
| 1. 24 | 4. 5, 280 |
| 2. 15 | 5. 16.5 |
| 3. 9 | 6. 5 |

Activity 6

1. 15, 000
2. 54, 000
3. 3

Activity 7

1. 1, 500 ml
2. 1, 800 ml
3. 2, 000 g
4. 500 g

Activity 5

- | | |
|--------|-----------|
| 1. 0.5 | 4. 28 |
| 2. 5 | 5. 1, 440 |
| 3. 72 | 6. 95 |

Activity 9

1. 10.5 pints
2. 28 oz
3. 5 ft. 4 inch

Activity 10

The answers may vary as it is a subjective type of activity.



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