Name & Surname: _____ Class: _____ Date: _____

Measure and Convert!

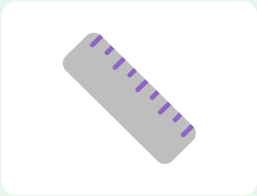
Switch units and solve real problems

About 45 minutes Level ★★★☆☆

Switching Units Made Easy

A **measurement** stays the same, only the **units** change.

- 1 km = 1000 m, 1 m = 100 cm, 1 cm = 10 mm
- 1 kg = 1000 g, 1 L = 1000 mL
- **Larger** to smaller: multiply. **Smaller** to larger: divide.
- US units: 1 ft = 12 in, 1 yd = 3 ft, 1 mi = 5280 ft, 1 lb = 16 oz, 1 gal = 4 qt



Task A

/8

Complete each growing pattern. Think about multiplying by 10, 100, or 1000.

1. 100, 200, 300, 400, ____, ____
2. 1000, 2000, 3000, ____, ____
3. 2, 20, 200, ____, ____
4. 5000, 4000, 3000, ____, ____

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Metric Lengths and Mass

Practice changing metric lengths, mass, and capacity.

Key words

unit: what you measure in, like cm or kg

metric: system based on 10s, 100s, and 1000s

scale: how many of one unit make another

convert: change from one unit to another

prefix: part like kilo- that means 1000

capacity: how much a container can hold

Task B

/10

Warm up with simple conversions, then solve real-life problems.

WARM UP

1. Convert 3 m to **centimeters**.

Answer: _____

2. Convert 5 cm to **millimeters**.

Answer: _____

3. Convert 2000 m to **kilometers**.

Answer: _____

4. Convert 4 kg to **grams**.

Answer: _____

PRACTICE

5. Convert 2.5 m to **centimeters**.

Answer: _____

6. Convert 5 cm to **meters**. Write a decimal.

Answer: _____

7. Convert 3 L to **milliliters**.

Answer: _____

PROBLEM SOLVING

8. A student has a ribbon 1.2 m long. How long is it in **centimeters**?

Answer: _____

9. A bottle holds 2 L of **water**. A student pours out 3 cups of 250 mL each. How many milliliters are left?

Answer: _____

10. A box weighs 1.5 kg. A second **box** weighs 800 g. What is the total weight in grams?

Answer: _____

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Customary Units in Action

Practice feet, yards, pounds, and gallons.

Task C

/10

Use multiplying or dividing to switch customary units.

WARM UP

1 Convert 2 ft to **inches**.

Answer: _____

2 Convert 3 yd to **feet**.

Answer: _____

3 Convert 32 oz to **pounds**.

Answer: _____

4 Convert 2 gal to **quarts**.

Answer: _____

PRACTICE

5 Convert 7 ft to **inches**.

Answer: _____

6 Convert 80 oz to **pounds**. Explain how you know.

Answer: _____

7 Convert 1.5 mi to **feet**.

Answer: _____

PROBLEM SOLVING

8 A hallway is 4 yd long. A rug is 7 ft long. How many **feet** longer is the hallway than the rug?

Answer: _____

9 A recipe needs 3 qt of **milk**. A student buys 1 gal for $4.50. How many quarts are left after using 3 qt?

Answer: _____

10 A student runs 1 mi and then 500 ft. How many **feet** did they run in all?

Answer: _____

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Think Step by Step

Climb from remembering facts to creating problems.

Task D

/6

Answer each **question** in order. Explain your **thinking**.

Remember How many **centimeters** are in 1 meter?

Remember Which is longer, 1.2 m or 121 cm? Explain how you **know**.

Understand Why do you **multiply** when you change meters to centimeters?

Apply Convert 2.5 km to **meters**.

Evaluate Student A says 1500 g is 1.5 kg. Student B says it is 15 kg. Who is **correct** and why?

Create Write a **real-world** problem that needs two unit changes to solve. Then solve it.

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Measure and Convert!

⁒ Task E

/12

Fill in the missing fractions, decimals, and percents. These help with decimal conversions like 0.05 m.

Fraction	Decimal	Percentage
$\frac{1}{2}$		
$\frac{1}{4}$		
	0.05	
	0.25	
		50%
		75%

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Try It Yourself

Follow the steps, then measure and calculate.

Task F

/2

Copy each method, then try the partner question.

WORKED EXAMPLE

Convert 3 km to meters.

1. 1 km = 1000 m
2. Larger to smaller, so multiply
3. 3 × 1000 = 3000

Answer: 3000 m

YOUR TURN

Convert 5 km to meters.

Answer: _____

WORKED EXAMPLE

Convert 48 in to feet.

1. 1 ft = 12 in
2. Smaller to larger, so divide
3. 48 ÷ 12 = 4

Answer: 4 ft

YOUR TURN

Convert 60 in to feet.

Answer: _____

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Measure and Convert!

Task G

/4

Work out the area and perimeter of these shapes.

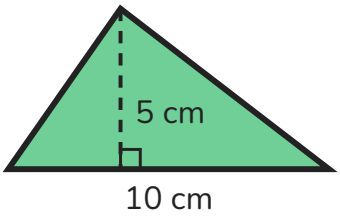
1



Area: _____ **cm²**

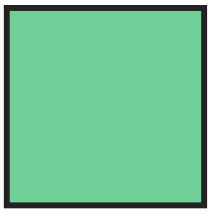
Perimeter: _____ **cm**

2



Area: _____ **cm²**

3



Perimeter: _____ **cm**

How did I do?

Circle a face for each line.

I can convert metric units between sizes.

I can convert customary units between sizes.

I can use conversions to solve multi-step problems.

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Answer sheet: Measure and Convert!

Task A

1. 500, 600
2. 4000, 5000
3. 2000, 20000
4. 2000, 1000

Task B

1. 300 cm
2. 50 mm
3. 2 km
4. 4000 g
5. 250 cm
6. 0.05 m
7. 3000 mL
8. 120 cm
9. 1250 mL
10. 2300 g

Task C

1. 24 in
2. 9 ft
3. 2 lb
4. 8 qt
5. 84 in
6. 5 lb, because you divide 80 by 16 since 16 oz = 1 lb
7. 7920 ft
8. 5 ft
9. 1 qt
10. 5780 ft

Task D

1. 100 cm
2. 121 cm is longer, because 1.2 m = 120 cm and 121 is greater than 120.
3. A centimeter is smaller, so you need more of them to make the same length.
4. 2500 m
5. Student A is correct, because you divide by 1000 to go from grams to kilograms: 1500 ÷ 1000 = 1.5.
6. Example: A jug holds 2 gal. A student uses 3 qt, then 1 gal. How many quarts are left? 8 - 3 - 4 = 1 qt.

Task E

1. $\frac{1}{2}$ = 0.5 = 50%
2. $\frac{1}{4}$ = 0.25 = 25%
3. $\frac{1}{20}$ = 0.05 = 5%
4. $\frac{1}{4}$ = 0.25 = 25%
5. $\frac{1}{2}$ = 0.5 = 50%
6. $\frac{3}{4}$ = 0.75 = 75%

Task F

1. 5000 m
2. 5 ft

Task G

1. area = 24 cm², perimeter = 20 cm
2. area = 25 cm²
3. perimeter = 20 cm

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