

Measure Switch

Change larger units into smaller units and solve measurement problems.

GRADE 4 • NY-4.MD.2.a

NY-4.MD.2.a "Solve problems involving fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit."

NAME _____

DATE _____

MAKE UNITS MATCH

To change a larger unit into a smaller unit, multiply by the number of smaller units in one larger unit. Before you add or subtract measurements, make sure the units match.

WORKED EXAMPLE

A camping trip lasts 9 weeks. How many days is that?

- 1 week = 7 days.
- Multiply 9 by 7.
- $9 \times 7 = 63$.

Answer: 63 days

PRACTICE 6 problems

1 Change 6 feet to inches.

ANSWER _____

2 Change 2 pounds to ounces.

ANSWER _____

3 Change 5 liters to milliliters.

ANSWER _____

4 Change \$7.35 to cents.

ANSWER _____

5 Change 1 1/2 hours to minutes.

ANSWER _____

6 Change 3/4 yard to inches.

ANSWER _____

APPLY IT Show your work

- 1** Jalen rides 2 miles and then rides 350 more yards on a bike trail. How many yards does he ride altogether?

WORK SPACE

ANSWER _____

- 2** The art club has 3 bottles with 500 milliliters of paint in each bottle. The club uses 1.25 liters of paint. How many milliliters of paint are left?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A cartoon movie starts at 10:45 AM and lasts $1\frac{3}{4}$ hours. What time does the movie end? Explain how you changed the fraction of an hour into minutes.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Change 6 feet to inches.	72 inches
2	Change 2 pounds to ounces.	32 ounces
3	Change 5 liters to milliliters.	5,000 milliliters
4	Change \$7.35 to cents.	735 cents
5	Change 1 1/2 hours to minutes.	90 minutes
6	Change 3/4 yard to inches.	27 inches

PART 2 • APPLY IT

- 3,870 yards** Change 2 miles to 3,520 yards because 1 mile equals 1,760 yards. Then add 350 yards.
- 250 milliliters** The bottles hold 1,500 milliliters altogether. Change 1.25 liters to 1,250 milliliters, then subtract.

CHALLENGE

12:30 PM. 3/4 hour is 45 minutes, so 1 3/4 hours is 1 hour 45 minutes. 10:45 AM plus 1 hour 45 minutes is 12:30 PM.

Accept equivalent wording for units, such as mL for milliliters. For the challenge, accept a correct explanation that shows 3/4 hour equals 45 minutes.