Ratio Reasoning: Convert Measurements within the Same System

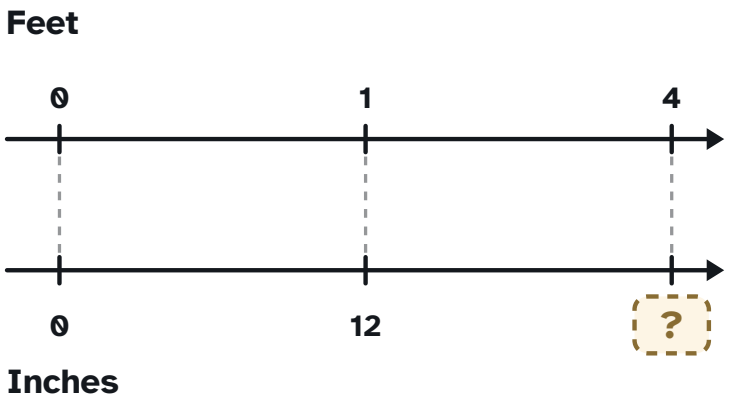
Use a unit ratio to change a measurement into another unit in the same system.

Name _____ **Date** _____

Tonight's spark

A ride sign says riders must be at least 44 inches tall. A child is 4 feet tall. The sign uses inches and the child's height uses feet. Can the child ride?

Make a guess first: is 4 feet more than 44 inches, or less?



Our class model: the unit ratio 12 : 1

Try it

Work it out on paper. Write one answer on each line.

1 **Which conversion factor is correct?**

A. 1 foot = 10 inches **B.** 1 foot = 12 inches **C.** 1 foot = 3 inches **D.** 1 foot = 100 inches

My answer _____

2 **Change 4 feet to inches.**

A. 16 **B.** 40 **C.** 48 **D.** 8

My answer _____

3 **3 yards = ? feet**

A. 1 **B.** 6 **C.** 12 **D.** 9

My answer _____

4 **Change 48 ounces to pounds. (1 pound = 16 ounces)**

A. 3 **B.** 32 **C.** 64 **D.** 768

My answer _____

5 **Which is true when you change feet to inches?**

A. Multiply by 12, because inches are smaller **B.** Divide by 12, because inches are smaller

C. Multiply by 12, because inches are bigger **D.** Divide by 12, because inches are bigger

My answer _____

Talk about it

Will the number of inches be bigger or smaller than the number of feet, and why?

Home mission

Find a ruler that is one foot long. Say the ride rule: riders must be at least 44 inches tall. A cousin is 3 feet tall. Can the cousin ride? Ask your student which unit changed and why they multiplied.

If we get stuck, ask

- Are we changing to a smaller unit or a bigger unit?
- Smaller unit means more pieces, so do we multiply or divide?
- What is the conversion factor between these two units?

Do it on a screen

Scan or type the link. Same lesson, with hints.

eduwonderlab.com/lessons/3-6/homework.html

How did it feel? (optional)

Tricky Getting there Got it