

# Unit Size Switch

See how unit size changes the count.

**GRADE 2 • TEKS 2.9.B**

**2.9.B** "describe the inverse relationship between the size of the unit and the number of units needed to equal the length of an object;"

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## THE BIG IDEA

For the same length, bigger units mean fewer units. Smaller units mean more units. Keep the object length the same when you compare.

## WORKED EXAMPLE

A doll scarf is 21 inches long.  
Measure it with 7-inch strips.  
How many strips are needed?

### DOLL SCARF

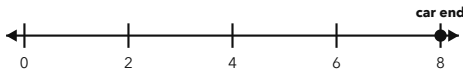
| Object length | Unit size |
|---------------|-----------|
| 21 inches     | 7 inches  |

1. The scarf is 21 inches long.
2. Each strip is 7 inches long.
3. 21 inches is  $7 + 7 + 7$ .
4. Three strips fit the scarf.

**Answer: 3 strips**

## PRACTICE 4 problems

- 1** An 8-inch toy car is measured with 2-inch cubes. How many cubes are needed?



**ANSWER** \_\_\_\_\_

- 2** A 12-inch game board is measured two ways. With 1-inch tiles, it takes 12 tiles. With 6-inch tiles, how many tiles are needed? Which tiles are bigger?

**ANSWER** \_\_\_\_\_

- 3** An 18-inch stuffed snake is measured with 9-inch strips. How many strips are needed?

**ANSWER** \_\_\_\_\_

- 4** A 10-inch toy shelf is measured with 5-inch blocks. How many blocks are needed? Would 1-inch cubes be more or fewer units?

**ANSWER** \_\_\_\_\_

## APPLY IT Show your work

- 1** Ava makes a 24-inch ribbon for her stuffed cat. She measures it with 6-inch strips. How many strips does she need?

WORK SPACE

**ANSWER** \_\_\_\_\_

- 2** Noah measures his 10-inch toy rocket with 2-inch cubes. How many cubes does he need?

WORK SPACE

**ANSWER** \_\_\_\_\_

## CHALLENGE One step up

A 16-inch play road is measured with 8-inch strips and then with 2-inch strips. How many of each strip are needed? Explain why the counts are different.

WORK SPACE AND ANSWER

**PART 1 • PRACTICE**

| # | PROBLEM                                                                                                                                                | ANSWER                       |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1 | An 8-inch toy car is measured with 2-inch cubes. How many cubes are needed?                                                                            | <b>4 cubes</b>               |
| 2 | A 12-inch game board is measured two ways. With 1-inch tiles, it takes 12 tiles. With 6-inch tiles, how many tiles are needed? Which tiles are bigger? | <b>2 tiles; 6-inch tiles</b> |
| 3 | An 18-inch stuffed snake is measured with 9-inch strips. How many strips are needed?                                                                   | <b>2 strips</b>              |
| 4 | A 10-inch toy shelf is measured with 5-inch blocks. How many blocks are needed? Would 1-inch cubes be more or fewer units?                             | <b>2 blocks; more units</b>  |

**PART 2 • APPLY IT**

1. **4 strips** Count groups of 6 in 24. There are 4 groups.
2. **5 cubes** Count groups of 2 in 10. There are 5 groups.

**CHALLENGE**

**2 of the 8-inch strips and 8 of the 2-inch strips. The 2-inch strips are smaller, so more strips are needed.**

Accept correct unit names, such as cubes, strips, tiles, or blocks. For comparison answers, accept equivalent wording such as bigger units need fewer units.