LESSON MAKER PRO

# Parts of a Whole

*Use tape models to find fractions of a group.*

**GRADE 5 · 5.NF.B.12.a**

**5.NF.B.12.a** "Use a visual fraction model (area model, set model, or linear model) to show (a/b) × q and create a story context for this equation to interpret the product as a parts of a partition of q into b equal parts."

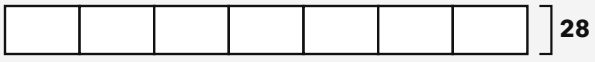
NAME _____ DATE _____

### DIVIDE, THEN TAKE

The denominator tells you how many equal parts to make. Find the size of one part, then take the number of parts named by the numerator.

### WORKED EXAMPLE

What is 2/7 of the total shown?




1. The tape has 7 equal parts.
2. 28 / 7 = 4 in each part.
3. 2 × 4 = 8.

**Answer: 2/7 × 28 = 8**

## PRACTICE 4 problems

**1** Draw a tape model for 3/4 × 16. Find the product.

**ANSWER** _____

**2** Draw a tape model for 4/5 × 15. Find the product.

**ANSWER** _____

**3** Find 5/6 × 18. Write a one-sentence story for the equation.

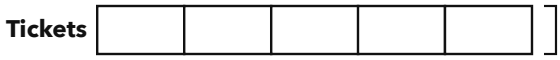
**ANSWER** _____

**4** Find 3/8 × 32. Write a one-sentence story for the equation.

**ANSWER** _____

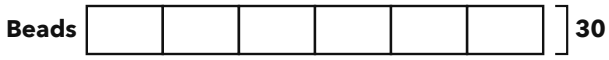
## APPLY IT Show your work

**1** A gamer has the tickets shown. They spend 3/5 of them on a prize. How many tickets do they spend?




**ANSWER** _____

**2** The art club has the beads shown. It uses 4/6 of them for bracelets. How many beads does it use?




**ANSWER** _____

## CHALLENGE One step up

A player has 40 game tickets and spends 5/8 of them. Draw a tape model. How many tickets are left? Explain what one part of your tape means.

WORK SPACE AND ANSWER

**ANSWER KEY**

# Parts of a Whole

**GRADE 5 · 5.NF.B.12.a**

## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | Draw a tape model for 3/4 × 16. Find the product. | **A tape with 4 equal parts of 4; 3 parts total 12.** |
| 2 | Draw a tape model for 4/5 × 15. Find the product. | **A tape with 5 equal parts of 3; 4 parts total 12.** |
| 3 | Find 5/6 × 18. Write a one-sentence story for the equation. | **15. Of 18 game tokens, I spend 5/6, or 15 tokens.** |
| 4 | Find 3/8 × 32. Write a one-sentence story for the equation. | **12. Of 32 stickers, I give away 3/8, or 12 stickers.** |

## PART 2 · APPLY IT

1. **15 tickets** The tape has 5 equal parts, so each part is 25 / 5 = 5 tickets. Three parts are 3 × 5 = 15 tickets.
2. **20 beads** Each of the 6 equal parts is 30 / 6 = 5 beads. Four parts are 4 × 5 = 20 beads.

## CHALLENGE

**15 tickets are left. A tape with 8 equal parts has 5 tickets in each part; 3 parts remain.**

Accept any clear model with the correct number of equal parts and the correct total. Story contexts should show the stated fraction of the stated whole.