# Multiplying Fractions and Whole Numbers

You can find the product of a fraction and a whole number.

Tran needs $\frac{2}{3}$ yard of fabric to sew a pair of shorts. How many yards of fabric will Tran need to sew 6 pairs of shorts?

**Step 1.** Multiply the numerator by the whole number.

$2 \times 6 = 12$

**Step 2.** Place the product over the denominator. Simplify if possible.

$\frac{12}{3} = 4$ yards of fabric

Remember: In word problems, "of" means "multiply."

Example: $\frac{3}{5}$ of $15 = \frac{3}{5} \times 15$

In questions **1–4**, find each product. Simplify if possible.

**1.** $\frac{1}{3} \times 60 =$ _____

**2.** $\frac{3}{4}$ of $32 =$ _____

**3.** $\frac{7}{8} \times 40 =$ _____

**4.** $\frac{2}{7}$ of $35 =$ _____

For questions **5–7**, use the table to the right.

**5.** What is $\frac{1}{7}$ the speed of a cheetah? _____

**6.** What is $\frac{1}{5}$ the speed of a cat? _____

**7.** What is $\frac{1}{5}$ the speed of a jackal? _____

| Animal | Speed (in mi/h) |
|--------|-----------------|
| Cat | 30 |
| Cheetah | 70 |
| Jackal | 35 |

Name _____

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Find each product.

**1.** $\frac{1}{4}$ of 96 = _____

**2.** $\frac{4}{7}$ of 28 = _____

**3.** $\frac{3}{4} \times 72 =$ _____

**4.** $45 \times \frac{3}{9} =$ _____

**5.** $56 \times \frac{7}{8} =$ _____

**6.** $42 \times \frac{3}{7} =$ _____

**7.** $\frac{1}{2}$ of 118 = _____

**8.** $\frac{3}{8}$ of 56 = _____

**9.** $\frac{1}{10} \times 400 =$ _____

**10.** $84 \times \frac{1}{6} =$ _____

**11.** $64 \times \frac{5}{16} =$ _____

**12.** $40 \times \frac{11}{20} =$ _____

**13.** $\frac{5}{8}$ of 48 = _____

**14.** $\frac{1}{7}$ of 77 = _____

**15.** $\frac{4}{5} \times 90 =$ _____

**16.** $42 \times \frac{3}{14} =$ _____

**17.** $72 \times \frac{5}{8} =$ _____

**18.** $18 \times \frac{2}{3} =$ _____

**19.** $\frac{5}{6} \times 84 =$ _____

**20.** $\frac{11}{12} \times 144 =$ _____

**21.** $\frac{6}{7} \times 42 =$ _____

**22.** Complete the table by writing the product of each expression in the box below it. Use a pattern to find each product. Explain the pattern.

| $\frac{1}{2} \times 32$ | $\frac{1}{4} \times 32$ | $\frac{1}{8} \times 32$ | $\frac{1}{16} \times 32$ |
|---|---|---|---|
| | | | |

**23. Reasoning** If $\frac{1}{2}$ of 1 is $\frac{1}{2}$, what is $\frac{1}{2}$ of 2, 3, and 4? _____

**24.** Which is $\frac{2}{3}$ of 225?

  **A** 75          **B** 113          **C** 150          **D** 450

**25. Explain It** Explain why $\frac{1}{2}$ of 2 equals one whole.

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