

Fraction Power Up

Multiply fractions by whole numbers.

GRADE 5 • 5.NR.3.4

5.NR.3.4 "Model and solve problems involving multiplication of a fraction and a whole number."

NAME _____

DATE _____

MULTIPLY EQUAL GROUPS

A whole number times a fraction means that many equal groups of the fraction. Multiply the whole number and the numerator, keep the denominator, then simplify or write a mixed number if needed.

WORKED EXAMPLE

$$9 \times 4/13$$

1. Write 9 as $9/1$.
2. Multiply the numerators: $9 \times 4 = 36$.
3. Keep the denominator: $36/13$.
4. Write $36/13$ as $2 \frac{10}{13}$.

Answer: $2 \frac{10}{13}$

PRACTICE 6 problems

1 Find the product: $5 \times 3/7 = \underline{\hspace{2cm}}$

ANSWER _____

2 Find the product: $8 \times 5/6 = \underline{\hspace{2cm}}$

ANSWER _____

3 Find the product: $3 \times 7/8 = \underline{\hspace{2cm}}$

ANSWER _____

4 Find the product: $10 \times 3/5 = \underline{\hspace{2cm}}$

ANSWER _____

5 Find the product: $11 \times 6/11 = \underline{\hspace{2cm}}$

ANSWER _____

6 Find the product: $14 \times 3/7 = \underline{\hspace{2cm}}$

ANSWER _____

APPLY IT Show your work

- 1** Jordan is making friendship bracelets. Each bracelet uses $\frac{3}{5}$ yard of cord. Jordan makes 8 bracelets. How many yards of cord does Jordan use?

WORK SPACE

ANSWER _____

- 2** During a reading challenge, Priya reads $\frac{2}{3}$ of a book each week for 11 weeks. At the same pace, how many books' worth does she read?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Noah says that $14 \times \frac{5}{6}$ is less than 14 because $\frac{5}{6}$ is less than 1. Is Noah correct? Explain your reasoning and find the product.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find the product: $5 \times \frac{3}{7} = \underline{\hspace{1cm}}$	2 $\frac{1}{7}$
2	Find the product: $8 \times \frac{5}{6} = \underline{\hspace{1cm}}$	6 $\frac{2}{3}$
3	Find the product: $3 \times \frac{7}{8} = \underline{\hspace{1cm}}$	2 $\frac{5}{8}$
4	Find the product: $10 \times \frac{3}{5} = \underline{\hspace{1cm}}$	6
5	Find the product: $11 \times \frac{6}{11} = \underline{\hspace{1cm}}$	6
6	Find the product: $14 \times \frac{3}{7} = \underline{\hspace{1cm}}$	6

PART 2 • APPLY IT

- 4 $\frac{4}{5}$ yards** Multiply $8 \times \frac{3}{5} = \frac{24}{5}$. Write $\frac{24}{5}$ as $4 \frac{4}{5}$.
- 7 $\frac{1}{3}$ books' worth** Multiply $11 \times \frac{2}{3} = \frac{22}{3}$. Write $\frac{22}{3}$ as $7 \frac{1}{3}$.

CHALLENGE

Yes. Multiplying 14 by a fraction less than 1 makes a product less than 14. $14 \times \frac{5}{6} = 11 \frac{2}{3}$.

Accept equivalent improper fractions, such as $\frac{15}{7}$ for $2 \frac{1}{7}$, when the value is correct. For the challenge, accept any accurate explanation that a whole number multiplied by a fraction less than 1 has a smaller product.