

# Varied Fluency

## Step 16: Multiply Unit Fractions by an Integer

### National Curriculum Objectives:

Mathematics Year 5: (5F5) [Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams](#)

Mathematics Year 5: (5F2a) [Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements  \$> 1\$  as a mixed number \[for example,  \$2/5 + 4/5 = 6/5 = 1 \frac{1}{5}\$ \]](#)

Mathematics Year 5: (5F2b) [Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths](#)

### Differentiation:

**Developing** Questions to support multiplying unit fractions by integers. Images provided for support.

**Expected** Questions to support multiplying unit fractions by integers. Answers either need to be converted to mixed numbers or simplified using knowledge of equivalent fractions. Images provided for support.

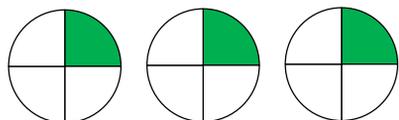
**Greater Depth** Questions to support multiplying unit fractions by integers. Answers need to be converted to mixed numbers and simplified using knowledge of equivalent fractions. Some incomplete pictorial support.

More [Year 5 Fractions](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

1a. Use the images to calculate:

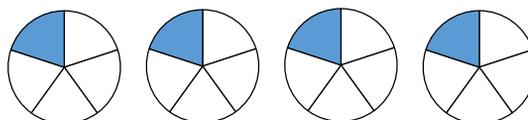
$$\frac{1}{4} \times 3 = \frac{\square}{\square}$$



VF

1b. Use the images to calculate:

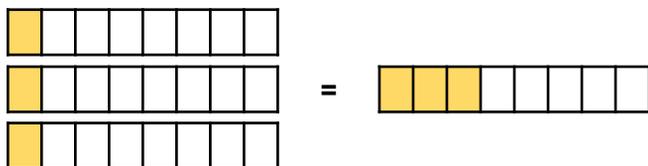
$$\frac{1}{5} \times 4 = \frac{\square}{\square}$$



VF

2a. Write the calculation that matches the image.

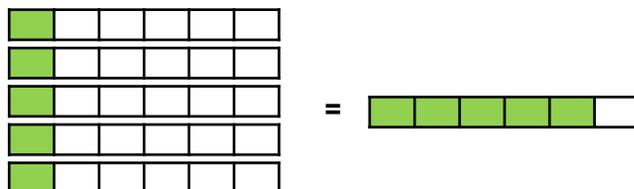
$$\frac{\square}{\square} \times \square = \frac{\square}{\square}$$



VF

2b. Write the calculation that matches the image.

$$\frac{\square}{\square} \times \square = \frac{\square}{\square}$$



VF

3a. Circle the correct answer to the calculation below.

$$\frac{1}{7} \times 6 = \frac{1}{7} \quad \frac{1}{7} \quad \frac{1}{7} \quad \frac{1}{7} \quad \frac{1}{7} \quad \frac{1}{7} \quad \frac{1}{7}$$

- A.  $\frac{1}{7}$       B.  $\frac{6}{7}$       C.  $\frac{6}{42}$



VF

3b. Circle the correct answer to the calculation below.

$$\frac{1}{9} \times 5 = \frac{1}{9} \quad \frac{1}{9}$$

- A.  $\frac{5}{45}$       B.  $\frac{9}{5}$       C.  $\frac{5}{9}$



VF

4a. Complete the calculations.

A.  $\frac{1}{6} \times \square = \frac{\square}{\square}$



B.  $\frac{1}{8} \times \square = \frac{\square}{\square}$



VF

4b. Complete the calculations.

A.  $\frac{1}{5} \times \square = \frac{\square}{\square}$



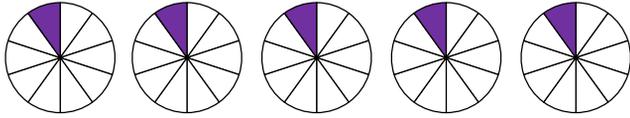
B.  $\frac{1}{7} \times \square = \frac{\square}{\square}$



VF

5a. Use the images to calculate:

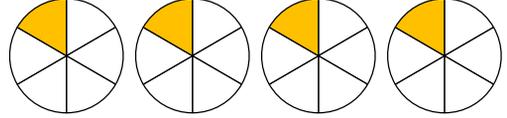
$$\frac{1}{10} \times 5 = \frac{\square}{\square} = \frac{\square}{\square}$$



VF

5b. Use the images to calculate:

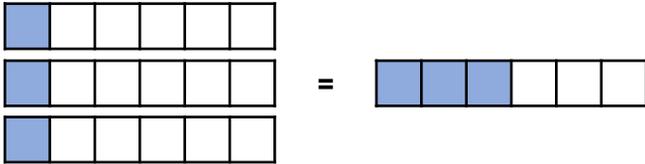
$$\frac{1}{6} \times 4 = \frac{\square}{\square} = \frac{\square}{\square}$$



VF

6a. Write the calculation that matches the image.

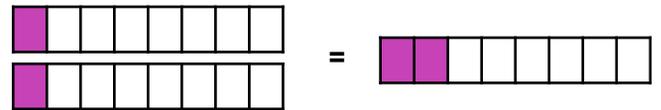
$$\frac{\square}{\square} \times \square = \frac{\square}{\square} = \frac{\square}{\square}$$



VF

6b. Write the calculation that matches the image.

$$\frac{\square}{\square} \times \square = \frac{\square}{\square} = \frac{\square}{\square}$$



VF

7a. Circle the correct answer to the calculation below.

$$\frac{1}{8} \times 4 = \frac{1}{8} \quad \frac{1}{8}$$

- A.  $\frac{1}{32}$       B.  $\frac{4}{32}$       C.  $\frac{1}{2}$



VF

7b. Circle the correct answer to the calculation below.

$$\frac{1}{12} \times 8 = \frac{1}{12} \quad \frac{1}{12}$$

- A.  $\frac{8}{96}$       B.  $\frac{2}{3}$       C.  $\frac{3}{4}$



VF

8a. Complete the calculations.

A.  $\frac{1}{10} \times \square =$     $= \frac{\square}{\square} = \frac{\square}{\square}$

B.  $\frac{1}{7} \times \square =$     $= \frac{\square}{\square} = \frac{\square}{\square}$



VF

8b. Complete the calculations.

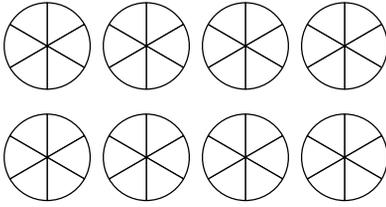
A.  $\frac{1}{9} \times \square =$     $= \frac{\square}{\square} = \frac{\square}{\square}$

B.  $\frac{1}{5} \times \square =$     $= \frac{\square}{\square} = \frac{\square}{\square}$



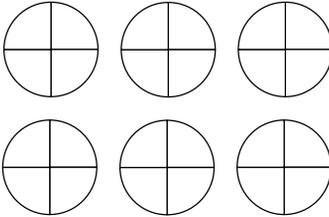
VF

9a. Use the images to calculate:

$$\frac{1}{6} \times 8 = \frac{\square}{\square} = \square \frac{\square}{\square} = \square \frac{\square}{\square}$$


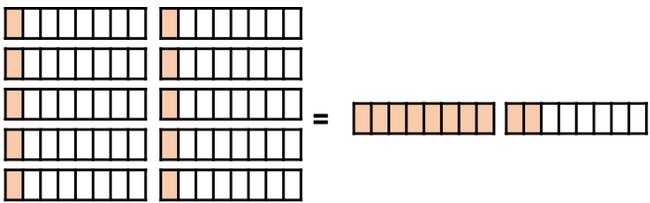

VF

9b. Use the images to calculate:

$$\frac{1}{4} \times 6 = \frac{\square}{\square} = \square \frac{\square}{\square} = \square \frac{\square}{\square}$$


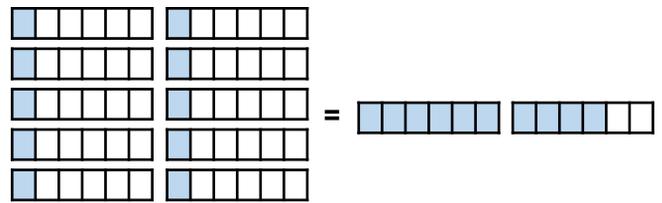

VF

10a. Write the calculation that matches the image.

$$\frac{\square}{\square} \times \square = \frac{\square}{\square} = \square \frac{\square}{\square} = \square \frac{\square}{\square}$$



VF

10b. Write the calculation that matches the image.

$$\frac{\square}{\square} \times \square = \frac{\square}{\square} = \square \frac{\square}{\square} = \square \frac{\square}{\square}$$



VF

11a. Circle the correct answer to the calculation below.

$$\frac{1}{9} \times 12 =$$

- A.  $1 \frac{12}{9}$     B.  $1 \frac{1}{3}$     C.  $1 \frac{1}{9}$



VF

11b. Circle the correct answer to the calculation below.

$$\frac{1}{8} \times 10 =$$

- A.  $1 \frac{1}{4}$     B.  $1 \frac{1}{8}$     C.  $1 \frac{10}{8}$



VF

12a. Complete the calculations.

A.  $\frac{1}{12} \times 16 = \frac{\square}{\square} = \square \frac{\square}{\square} = \square \frac{\square}{\square}$

B.  $\frac{1}{8} \times 12 = \frac{\square}{\square} = \square \frac{\square}{\square} = \square \frac{\square}{\square}$



VF

12b. Complete the calculations.

A.  $\frac{1}{9} \times 15 = \frac{\square}{\square} = \square \frac{\square}{\square} = \square \frac{\square}{\square}$

B.  $\frac{1}{12} \times 14 = \frac{\square}{\square} = \square \frac{\square}{\square} = \square \frac{\square}{\square}$



VF

## Varied Fluency

### Multiply Unit Fractions by an Integer

#### Developing

1a.  $\frac{3}{4}$

2a.  $\frac{1}{8} \times 3 = \frac{3}{8}$

3a. **B**

4a. **A.**  $\frac{1}{6} \times 5 = \frac{5}{6}$

**B.**  $\frac{1}{8} \times 7 = \frac{7}{8}$

#### Expected

5a.  $\frac{5}{10} = \frac{1}{2}$

6a.  $\frac{1}{6} \times 3 = \frac{3}{6} = \frac{1}{2}$

7a. **C**

8a. **A.**  $\frac{1}{10} \times 11 = \frac{11}{10} = 1\frac{1}{10}$

**B.**  $\frac{1}{7} \times 12 = \frac{12}{7} = 1\frac{5}{7}$

#### Greater Depth

9a.  $\frac{8}{6} = 1\frac{2}{6} = 1\frac{1}{3}$

10a.  $\frac{1}{8} \times 10 = \frac{10}{8} = 1\frac{2}{8} = 1\frac{1}{4}$

11a. **B**

12a. **A.**  $\frac{1}{12} \times 16 = \frac{16}{12} = 1\frac{4}{12} = 1\frac{1}{3}$

**B.**  $\frac{1}{8} \times 12 = \frac{12}{8} = 1\frac{4}{8} = 1\frac{1}{2}$

## Varied Fluency

### Multiply Unit Fractions by an Integer

#### Developing

1b.  $\frac{4}{5}$

2b.  $\frac{1}{6} \times 5 = \frac{5}{6}$

3b. **C**

4b. **A.**  $\frac{1}{5} \times 3 = \frac{3}{5}$

**B.**  $\frac{1}{7} \times 3 = \frac{3}{7}$

#### Expected

5b.  $\frac{4}{6} = \frac{2}{3}$

6b.  $\frac{1}{8} \times 2 = \frac{2}{8} = \frac{1}{4}$

7b. **B**

8b. **A.**  $\frac{1}{9} \times 10 = \frac{10}{9} = 1\frac{1}{9}$

**B.**  $\frac{1}{5} \times 8 = \frac{8}{5} = 1\frac{3}{5}$

#### Greater Depth

9b.  $\frac{6}{4} = 1\frac{2}{4} = 1\frac{1}{2}$

10b.  $\frac{1}{6} \times 10 = \frac{10}{6} = 1\frac{4}{6} = 1\frac{2}{3}$

11b. **A**

12b. **A.**  $\frac{1}{9} \times 15 = \frac{15}{9} = 1\frac{6}{9} = 1\frac{2}{3}$

**B.**  $\frac{1}{12} \times 14 = \frac{14}{12} = 1\frac{2}{12} = 1\frac{1}{6}$