

Varied Fluency

Step 17: Multiply Non-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: (5F3) [Compare and order fractions whose denominators are all multiples of the same number](#)

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 non-unit fractions by integers. Images provided for support. Answers are within 1.

Expected Questions to support multiplying non-unit fractions by integers. Answers either need to be converted to mixed numbers or simplified using knowledge of equivalent fractions. Some pictorial support.

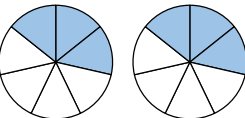
Greater Depth Questions to support multiplying non-unit fractions by integers. Answers need to be converted to mixed numbers and simplified using knowledge of equivalent fractions. No pictorial support.

More [Year 5 Fractions](#) resources.

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

Multiply Non-Unit Fractions by an Integer

1a. Match the calculation to the correct answer.

$$\frac{3}{7} \times 2 =$$


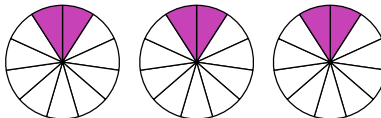
A. $\frac{6}{7}$ B. $\frac{6}{14}$ C. $\frac{3}{14}$



VF

Multiply Non-Unit Fractions by an Integer

1b. Match the calculation to the correct answer.

$$\frac{2}{11} \times 3 =$$


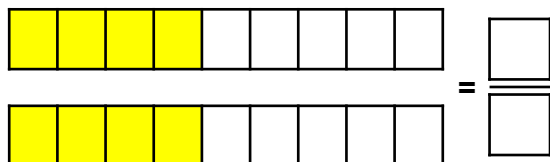
A. $\frac{6}{33}$ B. $\frac{2}{33}$ C. $\frac{6}{11}$



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2a. Solve the calculation below.

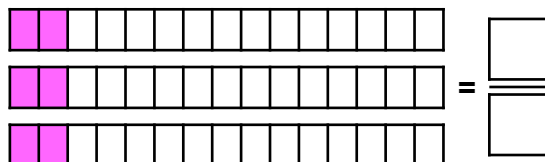
$$\frac{4}{9} \times 2$$



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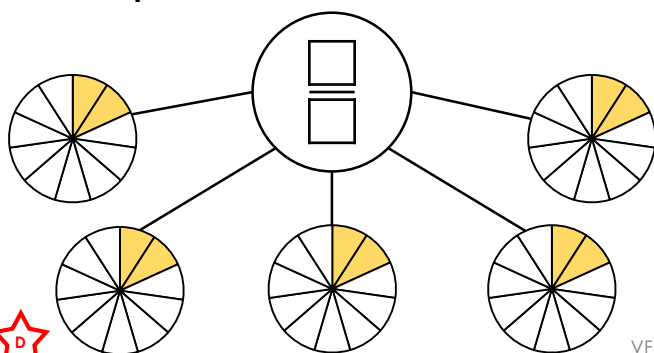
2b. Solve the calculation below.

$$\frac{2}{15} \times 3$$



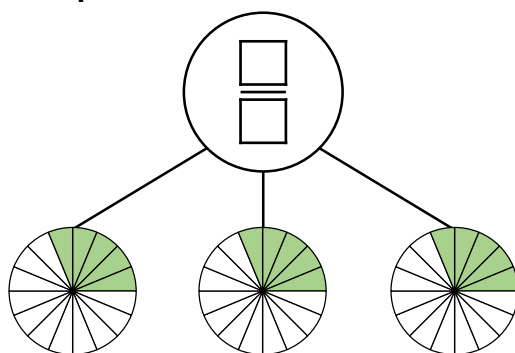
VF

3a. Complete the model below and write the multiplication calculation it shows.



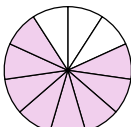
VF

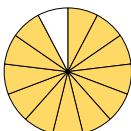
3b. Complete the model below and write the multiplication calculation it shows.



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4a. Complete the calculations.

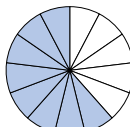
A. $\frac{2}{11} \times$ $=$  $=$

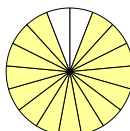
B. $\frac{2}{13} \times$ $=$  $=$



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4b. Complete the calculations.

A. $\frac{4}{13} \times$ $=$  $=$

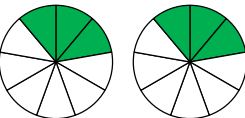
B. $\frac{3}{17} \times$ $=$  $=$



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Multiply Non-Unit Fractions by an Integer

5a. Match the calculation to the correct answer.

$$\frac{3}{9} \times 2 =$$



A. $\frac{6}{18}$ B. $\frac{8}{9}$ C. $\frac{2}{3}$



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Multiply Non-Unit Fractions by an Integer

5b. Match the calculation to the correct answer.

$$\frac{2}{14} \times 3 =$$


A. $\frac{2}{42}$ B. $\frac{3}{7}$ C. $\frac{6}{7}$



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6a. Solve the calculation below.

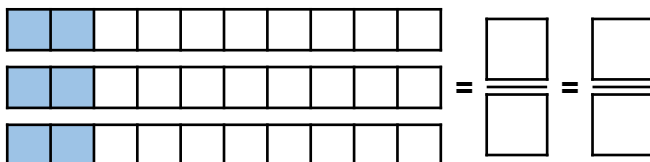
$$\frac{2}{12} \times 4$$



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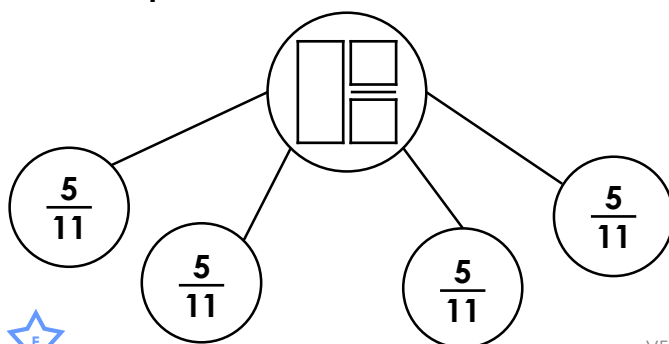
6b. Solve the calculation below.

$$\frac{2}{10} \times 3$$



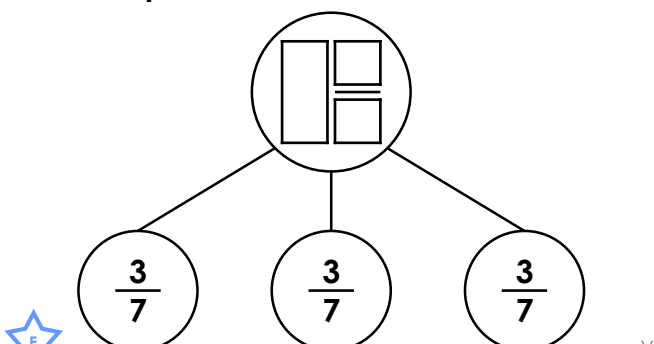
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7a. Complete the model below and write the multiplication calculation it shows.



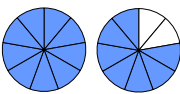
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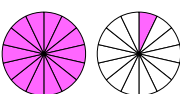
7b. Complete the model below and write the multiplication calculation it shows.



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8a. Complete the calculations.

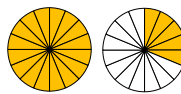
A. $\frac{4}{9} \times$ =  = =

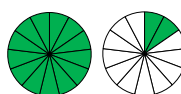
B. $\frac{5}{14} \times$ =  = =



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8b. Complete the calculations.

A. $\frac{7}{16} \times$ =  = =

B. $\frac{3}{13} \times$ =  = =



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Multiply Non-Unit Fractions by an Integer

9a. Match the calculation to the correct answer.

$$\frac{10}{15} \times 2 =$$

A. $1\frac{2}{3}$ B. $1\frac{1}{3}$ C. $1\frac{20}{30}$



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Multiply Non-Unit Fractions by an Integer

9b. Match the calculation to the correct answer.

$$\frac{4}{10} \times 3 =$$

A. $1\frac{1}{5}$ B. $1\frac{12}{30}$ C. $1\frac{4}{30}$



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10a. Solve the calculation below to its simplest form.

$$\frac{8}{16} \times 3 = \frac{\boxed{}}{\boxed{}} = \boxed{} \frac{\boxed{}}{\boxed{}}$$



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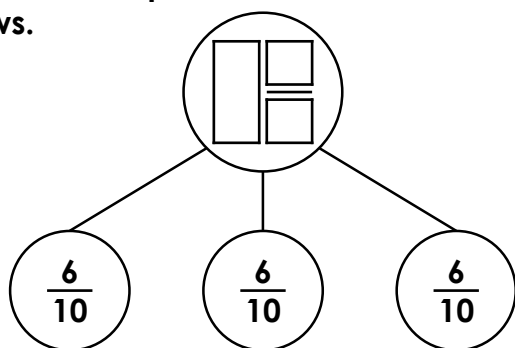
10b. Solve the calculation below to its simplest form.

$$\frac{6}{14} \times 4 = \frac{\boxed{}}{\boxed{}} = \boxed{} \frac{\boxed{}}{\boxed{}}$$



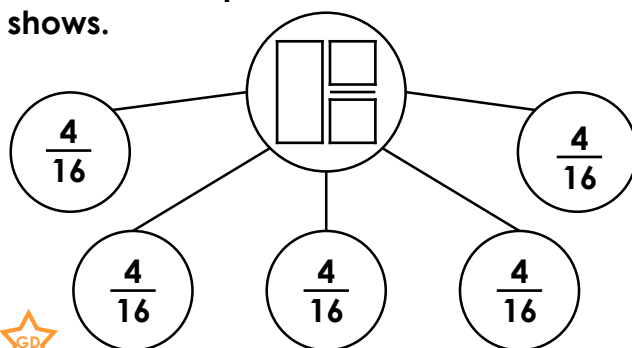
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11a. Complete the model below and write the multiplication calculation it shows.



VF

11b. Complete the model below and write the multiplication calculation it shows.



VF

12a. Complete the calculations.

A. $\frac{6}{8} \times \boxed{} =$ $= \frac{\boxed{}}{\boxed{}} = \boxed{} \frac{\boxed{}}{\boxed{}}$

B. $\frac{3}{14} \times \boxed{} =$ $= \frac{\boxed{}}{\boxed{}} = \boxed{} \frac{\boxed{}}{\boxed{}}$



VF

12b. Complete the calculations.

A. $\frac{6}{9} \times \boxed{} =$ $= \frac{\boxed{}}{\boxed{}} = \boxed{} \frac{\boxed{}}{\boxed{}}$

B. $\frac{4}{18} \times \boxed{} =$ $= \frac{\boxed{}}{\boxed{}} = \boxed{} \frac{\boxed{}}{\boxed{}}$



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Varied Fluency
Multiply Non-Unit Fractions by an
Integer

Developing

- 1a. **A**
2a. $\frac{8}{9}$
3a. $\frac{2}{11} \times 5 = \frac{10}{11}$
4a. **A.** $\frac{2}{11} \times 4 = \frac{8}{11}$; **B.** $\frac{2}{13} \times 6 = \frac{12}{13}$

Expected

- 5a. **C**
6a. $\frac{8}{12} = \frac{2}{3}$
7a. $\frac{5}{11} \times 4 = 1 \frac{9}{11}$
8a. **A.** $\frac{4}{9} \times 4 = \frac{16}{9} = 1 \frac{7}{9}$;
B. $\frac{5}{14} \times 3 = \frac{15}{14} = 1 \frac{1}{14}$

Greater Depth

- 9a. **B**
10a. $\frac{3}{2} = 1 \frac{1}{2}$
11a. $\frac{6}{10} \times 3 = 1 \frac{4}{5}$
12a. **A.** $\frac{6}{8} \times 2 = \frac{12}{8} = 1 \frac{1}{2}$;
B. $\frac{3}{14} \times 6 = \frac{18}{14} = 1 \frac{2}{7}$

Varied Fluency
Multiply Non-Unit Fractions by an
Integer

Developing

- 1b. **C**
2b. $\frac{6}{15}$ or may be expressed as $\frac{2}{5}$.
3b. $\frac{5}{16} \times 3 = \frac{15}{16}$
4b. **A.** $\frac{4}{13} \times 2 = \frac{8}{13}$; **B.** $\frac{3}{17} \times 5 = \frac{15}{17}$

Expected

- 5b. **B**
6b. $\frac{6}{10} = \frac{3}{5}$
7b. $\frac{3}{7} \times 3 = 1 \frac{2}{7}$
8b. **A.** $\frac{7}{16} \times 3 = \frac{21}{16} = 1 \frac{5}{16}$;
B. $\frac{3}{13} \times 5 = \frac{15}{13} = 1 \frac{2}{13}$

Greater Depth

- 9b. **A**
10b. $\frac{12}{7} = 1 \frac{5}{7}$
11b. $\frac{4}{16} \times 5 = 1 \frac{1}{4}$
12b. **A.** $\frac{6}{9} \times 2 = \frac{12}{9} = 1 \frac{1}{3}$;
B. $\frac{4}{18} \times 6 = \frac{24}{18} = 1 \frac{1}{3}$