Varied Fluency
Step 18: Multiply Mixed Numbers by Integers

National Curriculum Objectives:

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

Differentiation:

Developing Questions to support multiplying mixed numbers by integers. Includes unit fractions only and some use of images to support.
Expected Questions to support multiplying mixed numbers by integers. Includes simplified fractions.
Greater Depth Questions to support multiplying mixed numbers by integers. Includes fractions which need to be simplified.

More **Year 5 Fractions** resources.

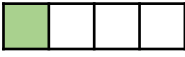**Did you like this resource? Don't forget to review it on our website.**

1a. Complete the steps below.

$2 \quad \times \quad 3 \quad = \quad \boxed{}$

$\dfrac{1}{4} \quad \times \quad 3 \quad = \quad \dfrac{\boxed{}}{4}$
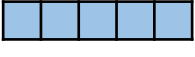
$2\,\dfrac{1}{4} \quad \times \quad 3 \quad =$
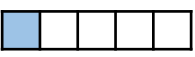
VF

1b. Complete the steps below.

$3 \quad \times \quad 2 \quad = \quad \boxed{}$

$\dfrac{1}{5} \quad \times \quad 2 \quad = \quad \dfrac{\boxed{}}{5}$

$3\,\dfrac{1}{5} \quad \times \quad 2 \quad =$

VF

2a. True or false?

$$4\,\dfrac{1}{6} \quad \times \quad 5 \quad = \quad 20\,\dfrac{5}{6}$$

VF

2b. True or false?

$$5\,\dfrac{1}{4} \quad \times \quad 3 \quad = \quad 15\,\dfrac{1}{4}$$

VF

3a. Match the calculations to their answers.

A. $3\,\dfrac{1}{5} \times 6$ $\qquad$ $15\,\dfrac{3}{5}$

B. $5\,\dfrac{1}{5} \times 3$ $\qquad$ $19\,\dfrac{1}{5}$

VF

3b. Match the calculations to their answers.

A. $2\,\dfrac{1}{6} \times 7$ $\qquad$ $12\,\dfrac{4}{6}$

B. $3\,\dfrac{1}{6} \times 4$ $\qquad$ $15\,\dfrac{1}{6}$

VF

4a. Complete the calculation below.

$$6\,\dfrac{1}{3} \quad \times \quad 4 \quad =$$
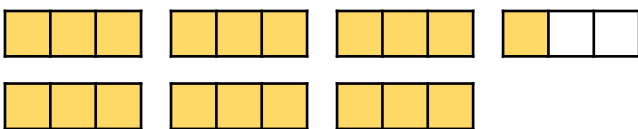
VF

4b. Complete the calculation below.

$$5\,\dfrac{1}{2} \quad \times \quad 3 \quad =$$

VF

classroomsecrets.co.uk

Varied Fluency – Multiply Mixed Numbers by Integers – Year 5 Developing
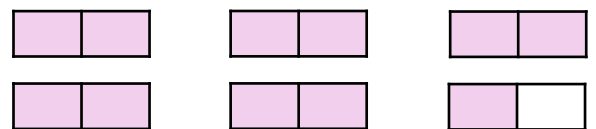
Multiply Mixed Numbers by Integers

Multiply Mixed Numbers by Integers

5a. Complete the steps below.

$5 \quad x \quad 6 \quad = \quad \square$

$\dfrac{3}{5} \quad x \quad 6 \quad = \quad \dfrac{\square}{5} \quad = \quad \boxed{}\dfrac{\square}{\square}$

$5\dfrac{3}{5} \quad x \quad 6 \quad = \quad \boxed{}\dfrac{\square}{\square}$

VF

5b. Complete the steps below.

$4 \quad x \quad 9 \quad = \quad \square$

$\dfrac{3}{4} \quad x \quad 9 \quad = \quad \dfrac{\square}{4} \quad = \quad \boxed{}\dfrac{\square}{\square}$

$4\dfrac{3}{4} \quad x \quad 9 \quad = \quad \boxed{}\dfrac{\square}{\square}$

VF

6a. True or false?

$3\dfrac{5}{6} \quad x \quad 7 \quad = \quad 26\dfrac{5}{6}$

VF

6b. True or false?

$2\dfrac{3}{7} \quad x \quad 8 \quad = \quad 18\dfrac{3}{7}$

VF

7a. Match the calculations to their answers.

A. $6\dfrac{4}{7} \quad x \quad 4$ $\qquad$ $21\dfrac{3}{7}$

B. $3\dfrac{3}{7} \quad x \quad 8$ $\qquad$ $26\dfrac{2}{7}$

C. $4\dfrac{2}{7} \quad x \quad 5$ $\qquad$ $27\dfrac{3}{7}$

VF

7b. Match the calculations to their answers.

A. $7\dfrac{2}{9} \quad x \quad 5$ $\qquad$ $34\dfrac{4}{9}$

B. $9\dfrac{4}{9} \quad x \quad 4$ $\qquad$ $36\dfrac{1}{9}$

C. $6\dfrac{8}{9} \quad x \quad 5$ $\qquad$ $37\dfrac{7}{9}$

VF

8a. Complete the calculations below.

$7\dfrac{5}{9} \quad x \quad 4 \quad = \quad \boxed{}\dfrac{\square}{\square}$

$5\dfrac{2}{3} \quad x \quad 8 \quad = \quad \boxed{}\dfrac{\square}{\square}$

VF

8b. Complete the calculations below.

$5\dfrac{4}{5} \quad x \quad 6 \quad = \quad \boxed{}\dfrac{\square}{\square}$

$8\dfrac{2}{3} \quad x \quad 7 \quad = \quad \boxed{}\dfrac{\square}{\square}$

VF

classroomsecrets.co.uk

Varied Fluency – Multiply Mixed Numbers by Integers – Year 5 Expected

9a. Complete the steps below using the simplest fraction.

$$8 \quad x \quad 7 \quad = \quad \boxed{}$$

$$\frac{16}{24} \quad x \quad 7 \quad = \quad \boxed{\frac{}{}} \quad = \quad \boxed{}\boxed{\frac{}{}}$$

$$8\,\frac{16}{24} \quad x \quad 7 \quad = \quad \boxed{}\boxed{\frac{}{}}$$

⭐ GD   VF

9b. Complete the steps below using the simplest fraction.

$$6 \quad x \quad 9 \quad = \quad \boxed{}$$

$$\frac{12}{15} \quad x \quad 9 \quad = \quad \boxed{\frac{}{}} \quad = \quad \boxed{}\boxed{\frac{}{}}$$

$$6\,\frac{12}{15} \quad x \quad 9 \quad = \quad \boxed{}\boxed{\frac{}{}}$$

⭐ GD   VF

10a. True or false?

$$4\,\frac{12}{16} \quad x \quad 9 \quad = \quad 36\,\frac{3}{4}$$

⭐ GD   VF

10b. True or false?

$$5\,\frac{12}{18} \quad x \quad 7 \quad = \quad 39\,\frac{2}{3}$$

⭐ GD   VF

11a. Match the calculations to their answers.

A. $5\,\frac{14}{21} \quad x \quad 7$ $54\,\frac{2}{3}$

B. $6\,\frac{25}{30} \quad x \quad 8$ $40\,\frac{1}{2}$

C. $4\,\frac{18}{36} \quad x \quad 9$ $39\,\frac{2}{3}$

⭐ GD   VF

11b. Match the calculations to their answers.

A. $4\,\frac{12}{32} \quad x \quad 7$ $35\,\frac{1}{4}$

B. $3\,\frac{18}{24} \quad x \quad 9$ $33\,\frac{3}{4}$

C. $5\,\frac{42}{48} \quad x \quad 6$ $30\,\frac{5}{8}$

⭐ GD   VF

12a. Complete the calculations below giving the simplest fraction.

$$6\,\frac{24}{42} \quad x \quad 5 \quad = \quad \boxed{}\boxed{\frac{}{}}$$

$$8\,\frac{56}{63} \quad x \quad 8 \quad = \quad \boxed{}\boxed{\frac{}{}}$$

⭐ GD   VF

12b. Complete the calculations below giving the simplest fraction.

$$4\,\frac{64}{72} \quad x \quad 7 \quad = \quad \boxed{}\boxed{\frac{}{}}$$

$$6\,\frac{21}{49} \quad x \quad 8 \quad = \quad \boxed{}\boxed{\frac{}{}}$$

⭐ GD   VF

classroomsecrets.co.uk

Developing

1a. $6, 3, 6\frac{3}{4}$

2a. True

3a. $A = 19\frac{1}{5}$, $B = 15\frac{3}{5}$

4a. $25\frac{1}{3}$

Developing

1b. $6, 2, 6\frac{2}{5}$

2b. False, the correct answer is $15\frac{3}{4}$.

3b. $A = 15\frac{1}{6}$, $B = 12\frac{4}{6}$

4b. $16\frac{1}{2}$

Expected

5a. $30, 18, 3\frac{3}{5}, 33\frac{3}{5}$

6a. True

7a. $A = 26\frac{2}{7}$, $B = 27\frac{3}{7}$, $C = 21\frac{3}{7}$

8a. $30\frac{2}{9}$, $45\frac{1}{3}$

Expected

5b. $36, 27, 6\frac{3}{4}, 42\frac{3}{4}$

6b. False, the correct answer is $19\frac{3}{7}$.

7b. $A = 36\frac{1}{9}$, $B = 37\frac{7}{9}$, $C = 34\frac{4}{9}$

8b. $34\frac{4}{5}$, $60\frac{2}{3}$

Greater Depth

9a. $56, \frac{112}{24}, 4\frac{2}{3}, 60\frac{2}{3}$

10a. False, the correct answer is $42\frac{3}{4}$.

11a. $A = 39\frac{2}{3}$, $B = 54\frac{2}{3}$, $C = 40\frac{1}{2}$

12a. $32\frac{6}{7}$, $71\frac{1}{9}$

Greater Depth

9b. $54, \frac{108}{15}, 7\frac{1}{5}, 61\frac{1}{5}$

10b. True

11b. $A = 30\frac{5}{8}$, $B = 33\frac{3}{4}$, $C = 35\frac{1}{4}$

12b. $34\frac{2}{9}$, $51\frac{3}{7}$

classroomsecrets.co.uk
Varied Fluency – Multiply Mixed Numbers by Integers ANSWERS