Multiply unit fractions by an integer

1 Complete the calculations.

Use bar models to help you.

a) $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \square$ $\quad 3 \times \frac{1}{5} = \square$

b) $\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \square$ $\quad 4 \times \frac{1}{7} = \square$

c) $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \square$ $\quad 5 \times \frac{1}{8} = \square$

d) $\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = \square$ $\quad 7 \times \frac{1}{10} = \square$

2 Complete the multiplications.

a) $3 \times \frac{1}{8} = \square$

b) $3 \times \frac{1}{10} = \square$

c) $\frac{1}{8} \times 5 = \square$

d) $9 \times \frac{1}{10} = \square$

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

f) $\frac{1}{9} \times 8 = \square$

g) $8 \times \frac{1}{11} = \square$

h) $\frac{1}{11} \times 10 = \square$

3 Match the addition to the equivalent multiplication.

$\frac{1}{3} + \frac{1}{3}$	$2 \times \frac{1}{5}$
$\frac{1}{5} + \frac{1}{5} + \frac{1}{5}$	$\frac{1}{4} \times 3$
$\frac{1}{5} + \frac{1}{5}$	$3 \times \frac{1}{5}$
$\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$	$2 \times \frac{1}{3}$

4 A pizza is cut into sixths.

Jack eats five of the slices.

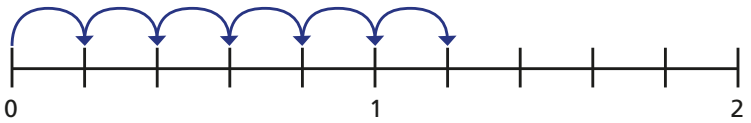
Write a multiplication to represent this.

5 Complete the multiplications.

Use the number lines to help you.

Give each answer as an improper fraction and as a mixed number.

a)



$6 \times \frac{1}{5} = \square = \square$

Multiply unit fractions by an integer

3 Match the addition to the equivalent multiplication.

$\frac{1}{3} + \frac{1}{3}$	$2 \times \frac{1}{5}$
$\frac{1}{5} + \frac{1}{5} + \frac{1}{5}$	$\frac{1}{4} \times 3$
$\frac{1}{5} + \frac{1}{5}$	$3 \times \frac{1}{5}$
$\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$	$2 \times \frac{1}{3}$

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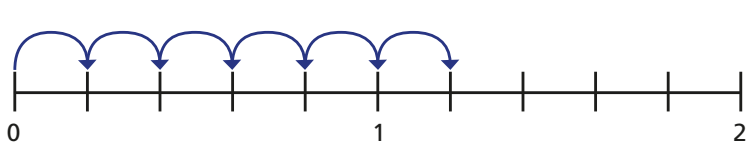
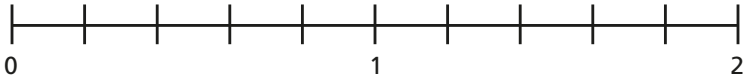


$6 \times \frac{1}{5} = \square = \square$

b)



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

6 Complete the multiplications.

a) $11 \times \frac{1}{10} = \square = \square$

b) $11 \times \frac{1}{9} = \square = \square$

c) $\frac{1}{8} \times 11 = \square = \square$

d) $11 \times \frac{1}{7} = \square = \square$

e) $11 \times \frac{1}{6} = \square = \square$

What do you notice?

Does this pattern continue?

7 Complete the calculations.

a) $\square \times \frac{1}{3} = \frac{2}{3}$

b) $\square \times \frac{1}{3} = 1$

c) $\square \times \frac{1}{7} = 1$

d) $\frac{1}{7} \times \square = 1\frac{3}{7}$

e) $\frac{1}{8} \times \square = 1\frac{3}{8}$

f) $\square \times \frac{1}{2} = 3\frac{1}{2}$

g) $\square \times \frac{1}{3} = 3\frac{1}{3}$

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