

Multiply unit fractions by an integer



1 Complete the calculations.

Use the bar models to help you.

a)

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$$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \boxed{}$$

$$3 \times \frac{1}{5} = \boxed{}$$

b)

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$$\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \boxed{}$$

$$4 \times \frac{1}{7} = \boxed{}$$

c)

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$$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \boxed{}$$

$$5 \times \frac{1}{8} = \boxed{}$$

d)

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$$\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = \boxed{}$$

$$7 \times \frac{1}{10} = \boxed{}$$

2 Complete the multiplications.

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

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

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

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

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

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

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

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

3 Match the addition to the equivalent multiplication.

$$\frac{1}{3} + \frac{1}{3}$$

$$2 \times \frac{1}{5}$$

$$\frac{1}{5} + \frac{1}{5} + \frac{1}{5}$$

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

$$\frac{1}{5} + \frac{1}{5}$$

$$3 \times \frac{1}{5}$$

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$$

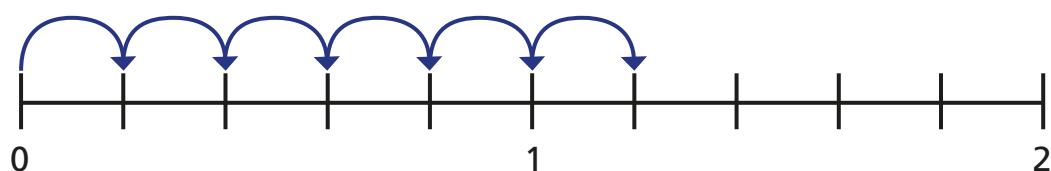
$$2 \times \frac{1}{3}$$

- 4 A pizza is cut into sixths.
Jack eats five of the slices.
Write a multiplication to represent this.

$$\square \times \square = \square$$

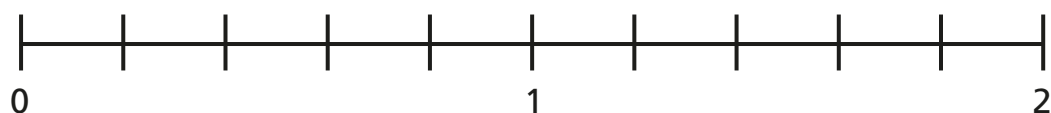
- 5 Complete the multiplications.
Use the number lines to help you.
Give each answer as an improper fraction and as a mixed number.

a)



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

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

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

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

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

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

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

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

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

Multiply non-unit fractions by an integer



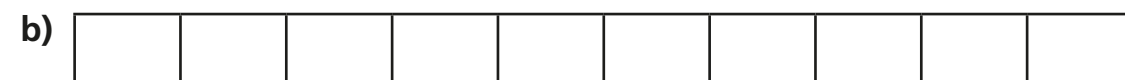
1 Complete the calculations.

Use the bar models to help you.



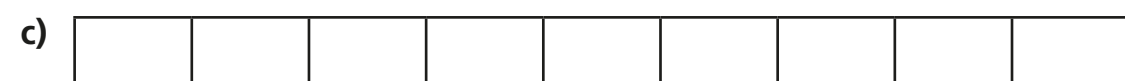
$$\frac{2}{7} + \frac{2}{7} + \frac{2}{7} = \boxed{}$$

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



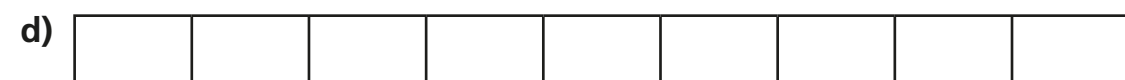
$$\frac{3}{10} + \frac{3}{10} + \frac{3}{10} = \boxed{}$$

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



$$\frac{2}{9} + \frac{2}{9} + \frac{2}{9} + \frac{2}{9} = \boxed{}$$

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



$$\frac{4}{9} + \frac{4}{9} = \boxed{}$$

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

What do you notice about parts c) and d)? Talk to a partner.

2 Complete the multiplications.

a) $2 \times \frac{3}{7} = \boxed{}$

d) $5 \times \frac{2}{11} = \boxed{}$

b) $3 \times \frac{3}{11} = \boxed{}$

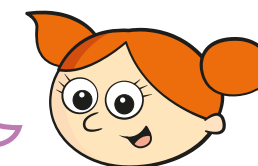
e) $\frac{2}{15} \times 7 = \boxed{}$

c) $\frac{2}{11} \times 4 = \boxed{}$

f) $\frac{7}{15} \times 2 = \boxed{}$

3

$$\frac{4}{11} \times 2 = \frac{8}{22}$$



Explain the mistake that Alex has made.

4

A cat eats $\frac{2}{15}$ of a bag of biscuits a day.

What fraction of the bag does the cat eat in 4 days?



The cat eats $\boxed{}$ of the bag in 4 days.

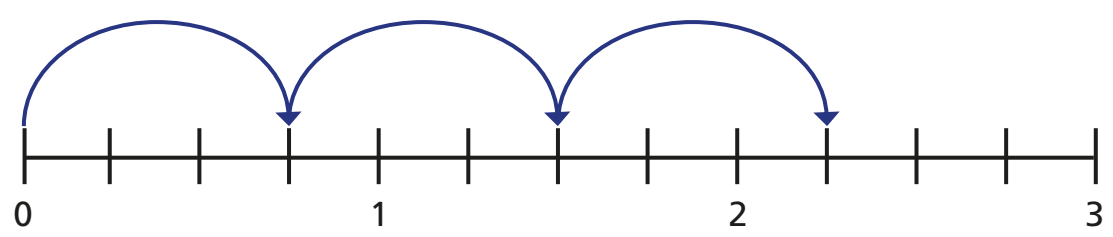
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Complete the multiplications.

Use the number lines to help you.

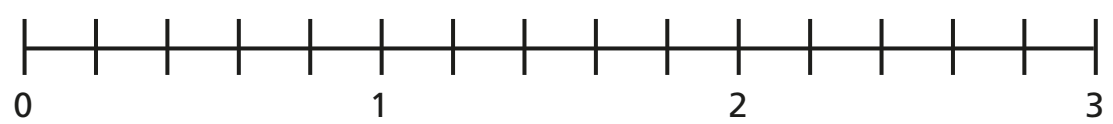
Give each answer as an improper fraction and as a mixed number.

a)



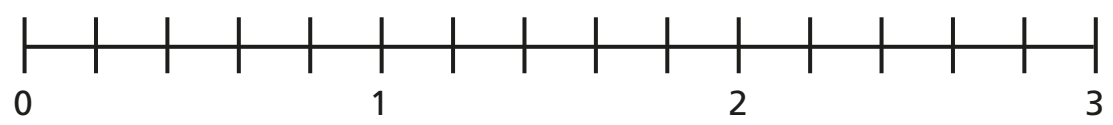
$$3 \times \frac{3}{4} = \boxed{} = \boxed{}$$

b)



$$4 \times \frac{3}{5} = \boxed{} = \boxed{}$$

c)



$$3 \times \frac{4}{5} = \boxed{} = \boxed{}$$



6

Complete the multiplications.

a) $5 \times \frac{2}{3} = \boxed{} = \boxed{}$

b) $4 \times \frac{4}{5} = \boxed{} = \boxed{}$

c) $\frac{2}{7} \times 11 = \boxed{} = \boxed{}$

d) $4 \times \frac{7}{9} = \boxed{} = \boxed{}$

e) $17 \times \frac{2}{11} = \boxed{} = \boxed{}$

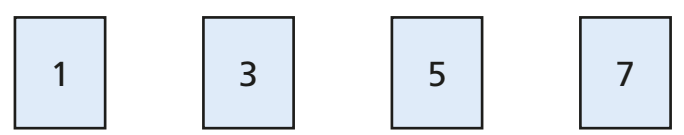
f) Describe the pattern you can see in the answers.

g) What could the next multiplication in the pattern be?

Write two possible options.

7

Here are some digit cards.



Use the digit cards to complete the multiplication.

$$\boxed{} \times \frac{\boxed{}}{8} = \frac{15}{8} = \boxed{} \frac{\boxed{}}{8}$$

