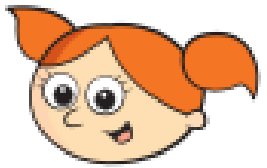
Amir and Alex are working out $3\frac{1}{2} - 2\frac{1}{4}$

First subtract 2 from 3,
then subtract $\frac{1}{4}$ from $\frac{1}{2}$
That leaves $1\frac{1}{4}$

Amir

Convert to an improper fraction first, $\frac{7}{2} - \frac{9}{4}$, then

$\frac{14}{4} - \frac{9}{4} = \frac{5}{4} = 1\frac{1}{4}$



Alex

RECALL

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

GUIDED PRACTICE

LO: Multiply non-unit fractions by an integer .

Some will even answer questions and spot patterns.
Some will use a number line to help them answer problems.
Most will match multiplying problems to addition problems.
All will use repeated addition to help them solve the problem.

LEARNING HABIT RESILIENCE.

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

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

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

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

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

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

INTELLIGENT PRACTICE.

Dive deeper 1

Match the addition to the equivalent multiplication.

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

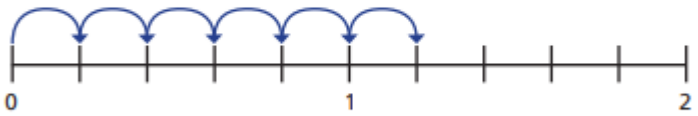
Dive deeper 2

Complete the multiplications.

Use the number lines to help you.

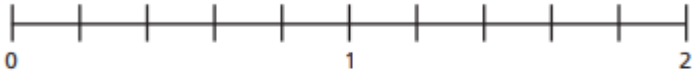
Give each answer as an improper fraction and as a mixed number.

a)



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

b)



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

Dive deeper 3

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?

DIVE DEEPER

$3 \times \frac{1}{8} =$ 3/8

$3 \times \frac{1}{10} =$ 3/10

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

$9 \times \frac{1}{10} =$ 9/10

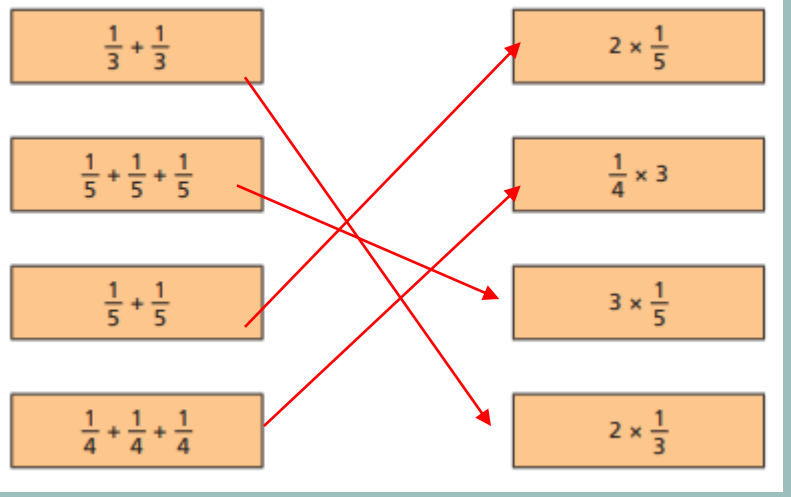
$\frac{1}{5} \times 4 =$ 4/5

$\frac{1}{9} \times 8 =$ 8/9

INTELLIGENT PRACTICE.

Dive deeper 1

Match the addition to the equivalent multiplication.



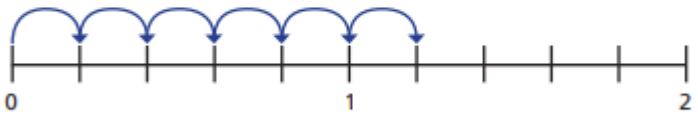
Dive deeper 2

Complete the multiplications.

Use the number lines to help you.

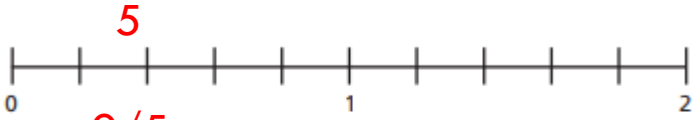
Give each answer as an improper fraction and as a mixed number.

a)



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

b)



9/5

$9\times\frac{1}{5}=$ = 1 4/5

Dive deeper 3

Complete the multiplications.

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

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

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

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

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

What do you notice?

Does this pattern continue?

DIVE DEEPER