

Key skill
Times tables
Adding

Tues Multiply a unit fraction by an integer

Weds: Multiply a non-unit fraction by an integer

Thurs: Multiply a mixed number by an integer

Fri: Fri: Mental arithmetic practice- mult and division revision MI
plan

Week 1

Spring 2 2024 Week 1

White Rose
MATHS

LO: To multiply a unit fraction by an integer

LO: To multiply a non-unit fraction by an integer

LO: To multiply a mixed number by an integer

Fri: Mental arithmetic practice- multiplication and division revision

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LO: To multiply a mixed number by an integer

Fri: Mental arithmetic practice- multiplication and division revision

LO: To multiply a unit fraction by an integer

Flashback 4

Year 5 | Week 4 | Day 1

Stick in
books and
complete

- 1) Use $<$, $>$ or $=$ to compare
 $160 \div 8$ 12×2



- 2) A school football team has 15 players.
They raised £350 for new shirts.
Have they enough to buy for all?



- 3) Which will give the greatest answer?

$$244 \times 3$$

$$245 \times 2$$

- 4) What number is written as CXL in Roman numerals?

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 $160 \div 8$ 12×2



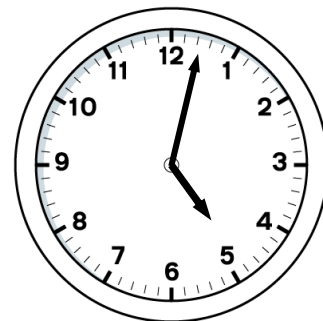
- 2) A school football team has 15 players.
 They raised £350 for new shirts.
 Have they enough to buy for all?



Tues

- 1) Use $<$, $>$ or $=$ to compare

$$160 \div 8 < 12 \times 2$$



- 2) A school football team has 15 players.
They raised £350 for new shirts.
Have they enough to buy for all?

Yes, $15 \times £20 = £300$



- 3) Which will give the greatest answer?

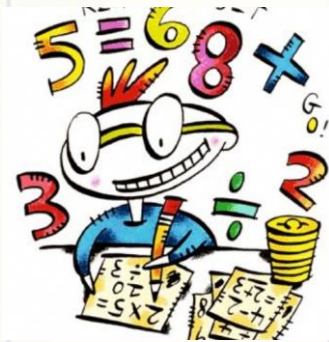
$$244 \times 3$$

$$245 \times 2$$

- 4) What number is written as CXL in Roman numerals?

140

Maths Three Repeating Golden Threads



Mastery

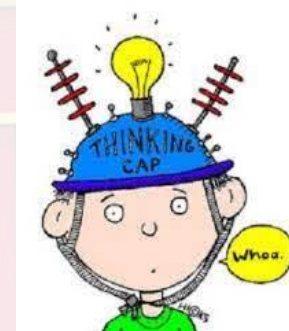
Pupils acquire a deep, long-term, secure adaptable understanding

Fluency

Quick and. efficient recall of facts and procedures

Application

The use of maths everyday in the real world, outside the classroom.



mastery $\longleftrightarrow$ fluency $\longleftrightarrow$ application

Term Spring 2 **Week beginning** 20.2.23

Block Multiplication and division (B)

Key vocabulary

Multiplication, division, digit, method, place holder, place value, remainder, partition, links to addition/subtraction, estimate, exchange

	WT	EX	S
Multiply a unit fraction by an integer			
Multiply a non-unit fraction by an integer			
Multiply a mixed number by an integer			
Calculate a fraction of a quantity			
Fraction of an amount			
Find the whole			
Use fractions as operators			

Stem sentences

- To multiply a fraction by an integer, I multiply the ____ by the integer and the ____ remains the same.
- I can partition ____ into ____ and ____.
- To find $\frac{1}{n}$ of ____, I need to divide by ____ and multiply by ____.
- I need to divide by the denominator and multiply by the denominator.
- If ____ is one equal part, all the parts must be ____.
- ____ is a factor of ____, so I can divide ____ by ____.

Crucial Vocab...

multiply
unit fraction
integer

Tues

multiply
unit fraction
integer

multiply
unit fraction
integer

multiply
unit fraction
integer

multiply
unit fraction
integer

multiply
unit fraction
integer

multiply
unit fraction
integer

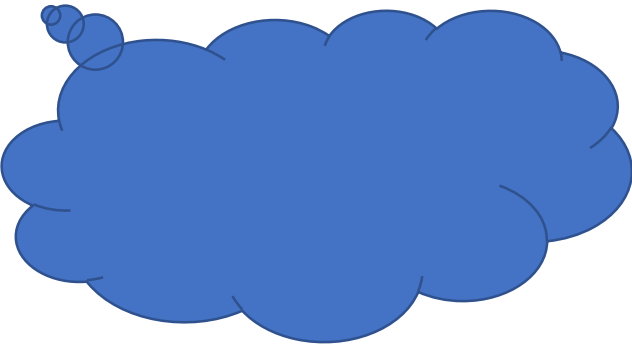
multiply
unit fraction
integer

multiply
unit fraction
integer

multiply
unit fraction
integer

multiply
unit fraction
integer

Tues



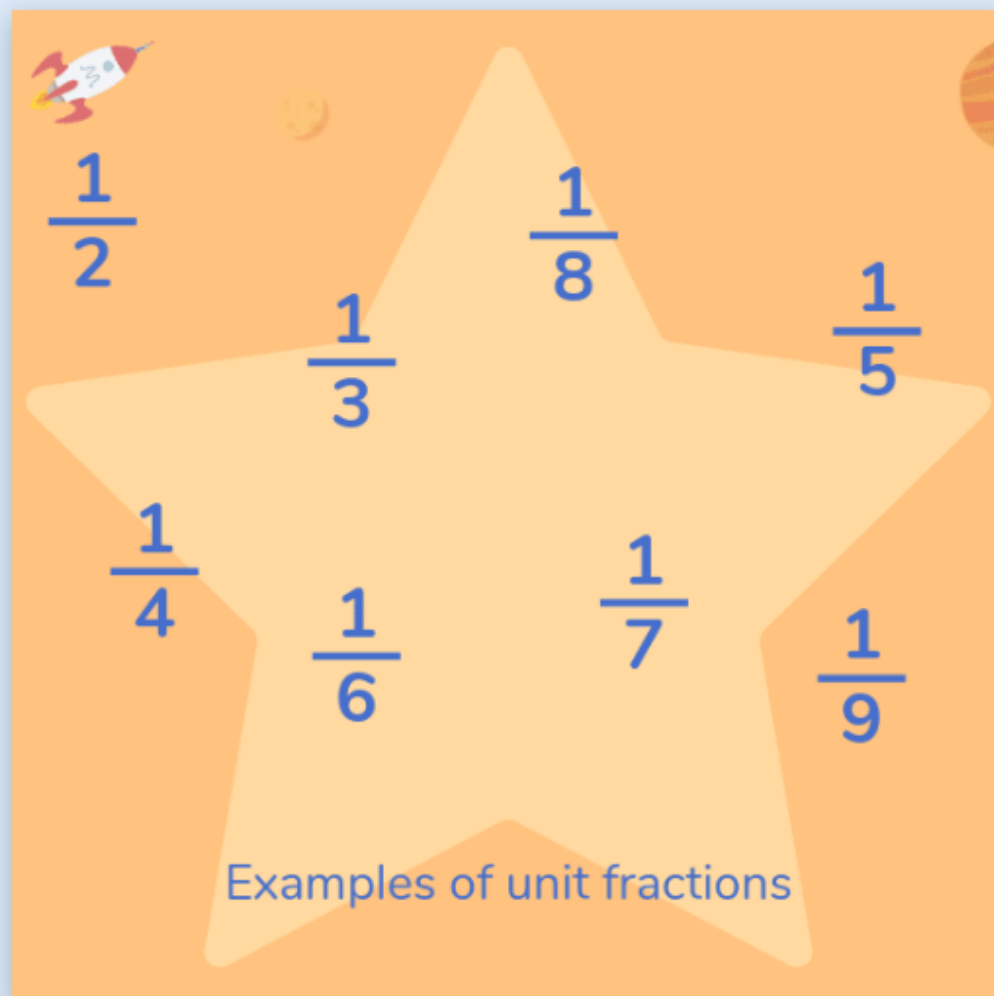
What does unit fraction mean?

What does integer mean?

What is a unit fraction?

A unit fraction is any fraction with 1 as its numerator (top number), and a whole number for the denominator (bottom number).

Examples of unit [fractions](#) include:



Integer numbers are whole numbers that can be positive or negative, but do not have fractions or decimals.

You can use the term "integer" to describe a whole number. This means a number without a [fraction](#) or a [decimal](#).

Unlike whole numbers, integer numbers refer to [negative numbers](#) as well as positive amounts.

Match the multiplication to the addition.

$$5 \times 2$$

$$9 + 9 + 9$$

$$0 \times 6$$

$$2 + 2 + 2 + 2 + 2$$

$$9 \times 3$$

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

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

$$0 + 0 + 0 + 0 + 0 + 0$$

Quick recap...

Match the multiplication to the addition.

5×2

$9 + 9 + 9$

0×6

$2 + 2 + 2 + 2 + 2$

9×3

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

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

$0 + 0 + 0 + 0 + 0 + 0$

Alex has 4 pieces of wood.

Each piece of wood is $\frac{1}{7}$ m long.

How long is all of Alex's wood? $\frac{4}{7}$ m

Have a think



$$\frac{1}{7}$$

$$\frac{1}{7}$$

$$\frac{1}{7}$$

$$\frac{1}{7}$$

$$\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \frac{4}{7}$$

$$\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \frac{4}{7}$$

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

Have a think $\frac{1}{7}$

What is the
same?

What is
different?

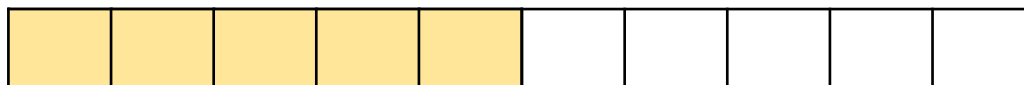
$$\frac{1}{3} + \frac{1}{3} = 2 \times \frac{1}{3} = \frac{2}{3}$$



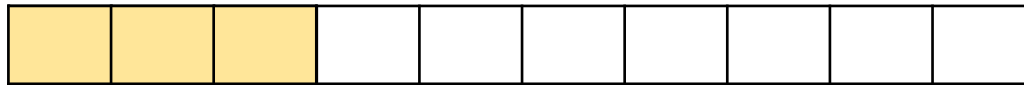
Have a think



$$\frac{1}{10} \times 5 = \frac{5}{10} = \frac{1}{2}$$

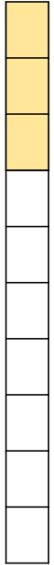


$$\frac{1}{10} \times 3 = \frac{3}{10}$$



To multiply a fraction by an integer, I multiply the numerator by the integer and the denominator remains the same.

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

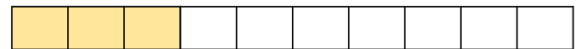


To multiply a fraction by an integer, I multiply the _____ by the integer and the _____ remains the same.

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



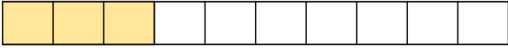
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$$\frac{1}{10} \times 3 = \frac{3}{10}$$



To multiply a fraction by an integer, I multiply the _____ by the integer and the _____ remains the same.

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



To multiply a fraction by an integer, I multiply the _____ by the integer and the _____ remains the same.

Tues

Multiply a unit fraction by an integer



1 Match each addition to the equivalent multiplication.

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

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

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

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

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

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

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

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

2 Complete the calculations.

Use the bar models to help you.



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

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



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

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



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

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



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

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

What do you notice?

3 Complete the multiplications.

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

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

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

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



Over to you...



3

Complete the multiplications.

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

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

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

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

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

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

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

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

3

Complete the multiplications.

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

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

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

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

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

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

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

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

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Complete the multiplications.

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

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

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

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

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

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

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

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

Tues

3

Complete the multiplications.

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

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

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

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

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

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

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

3

Complete the multiplications.

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

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

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

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

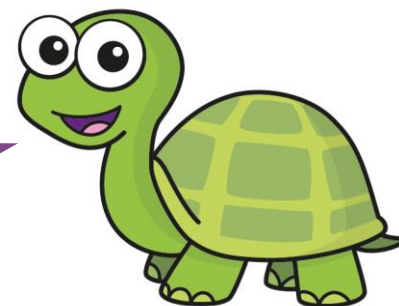
g) $8 \times \frac{1}{11} = \square$

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

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

A book is $\frac{1}{10}$ m long. How long would 12 books be if they were put next to each other?

I know! The books would be $\frac{12}{120}$ m long.



Do you agree with Tiny? Explain why.

Tiny is incorrect. Tiny has multiplied the numerator and the denominator by 12.

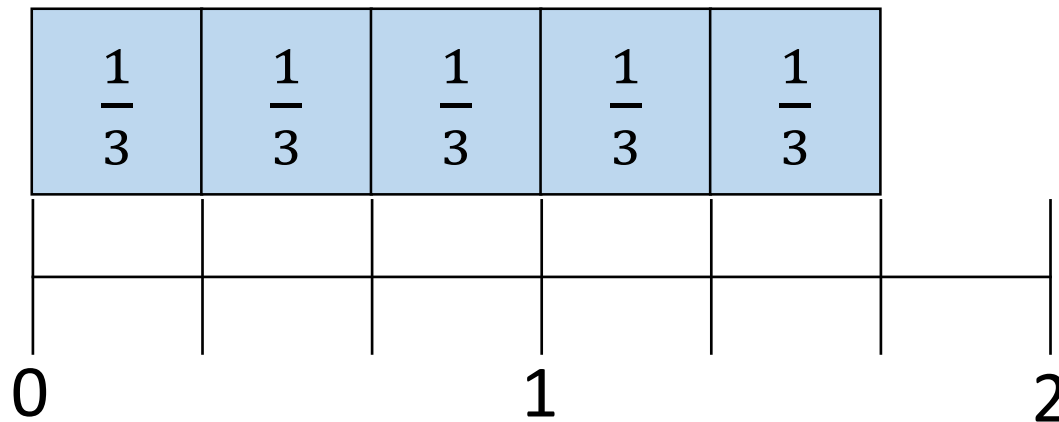
$$\frac{1}{10} \times 12 = \frac{12}{10} = 1 \frac{2}{10} = 1 \frac{1}{5}$$

Have a think



$$5 \times \frac{1}{3} = \frac{5}{3} = 1 \frac{2}{3}$$

Have a think



$$8 \times \frac{1}{2} = \frac{8}{2} = 4$$

Have a think



$$\frac{1}{6} \times 14 = \frac{14}{6} = 2 \frac{2}{6} = 2 \frac{1}{3}$$

$$\frac{1}{9} \times \square = 2$$

- 4 The length of a brick is $\frac{3}{20}$ m.



The total
length of 5 bricks is
 $\frac{15}{100}$ m.

Do you agree with Tiny? _____

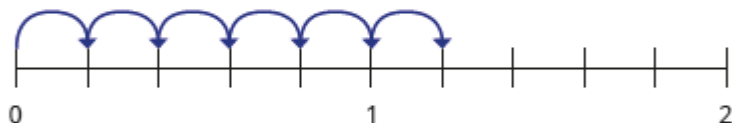
Explain your answer.

- 5 Complete the multiplications.

Use the number lines to help you.

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

a)



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

b)



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

- 4 The length of a brick is $\frac{3}{20}$ m.



The total
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Do you agree with Tiny? _____

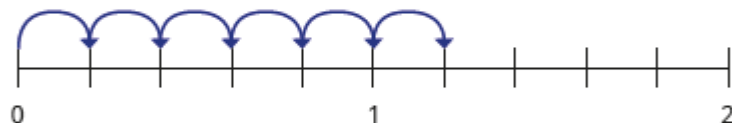
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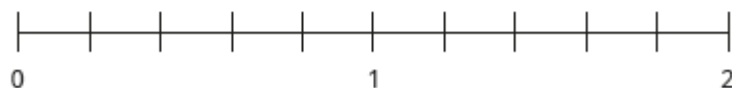
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b)



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Tues

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length of 5 bricks is
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Do you agree with Tiny? _____

Explain your answer.

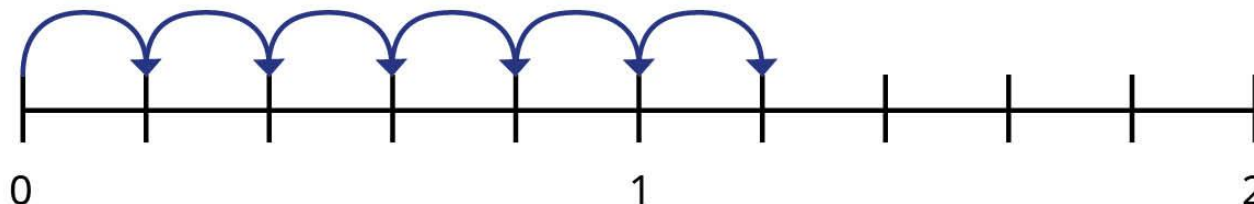


5 Complete the multiplications.

Use the number lines to help you.

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

a)

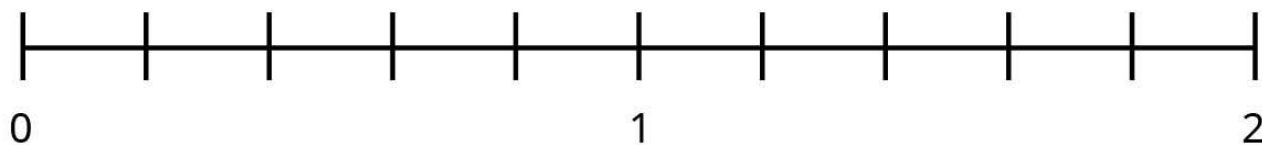


$$6 \times \frac{1}{5} = \boxed{} = \boxed{}$$



5

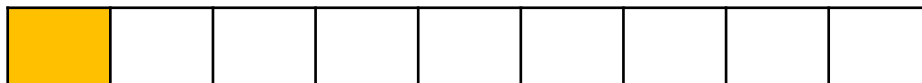
b)



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

$$\frac{1}{9} \times \square = 2$$

$$\frac{1}{9} \times 18 = \frac{18}{9}$$





Extension

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

Maths Meeting-Mon

Key skills test- check 9



21.2.24 LO: To multiply a non-unit fraction by an integer

Whiteboards

1) $4 \times \frac{1}{9} =$

2) Which is correct?

$$\frac{1}{5} \times 4 = \frac{4}{20}$$

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

3) $\boxed{} = 11 \times \frac{1}{5}$

4) $\frac{\boxed{}}{13} \times 3 = \frac{3}{13}$

Recap...

1) $4 \times \frac{1}{9} =$

2) Which is correct?

$$\frac{1}{5} \times 4 = \frac{4}{20}$$

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

3) $\boxed{} = 11 \times \frac{1}{5}$

4) $\frac{\boxed{}}{13} \times 3 = \frac{3}{13}$

Recap...

Maths Three Repeating Golden Threads



Mastery

Pupils acquire a deep, long-term, secure adaptable understanding

Fluency

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mastery ↔ fluency ↔ application

Term Spring 2 **Week beginning** 20.2.23

Block Multiplication and division (B)

Key vocabulary

Multiplication, division, digit, method, place holder, place value, remainder, partition, links to addition/subtraction, estimate, exchange

	WT	EX	S
Multiply a unit fraction by an integer			
Multiply a non-unit fraction by an integer			
Multiply a mixed number by an integer			
Calculate a fraction of a quantity			
Fraction of an amount			
Find the whole			
Use fractions as operators			

Stem sentences

- To multiply a fraction by an integer, I multiply the ____ by the integer and the ____ remains the same.
- I can partition ____ into ____ and ____.
- To find $\frac{1}{n}$ of ____, I need to divide by ____ and multiply by ____.
- I need to divide by the denominator and multiply by the denominator.
- If ____ is one equal part, all the parts must be ____.
- ____ is a factor of ____, so I can divide ____ by ____.



Recap....

What does unit fraction mean?

What does integer mean?

So what do you think non- unit fraction means?

Crucial Vocab...

non-unit fraction
integer
multiply

Weds

non-unit fraction
integer
multiply

non-unit fraction
integer
multiply

non-unit fraction
integer
multiply

non-unit fraction
integer
multiply

non-unit fraction
integer
multiply

non-unit fraction
integer
multiply

non-unit fraction
integer
multiply

non-unit fraction
integer
multiply

non-unit fraction
integer
multiply

Weds

$$1) \quad 4 \times \frac{1}{9} = \frac{4}{9}$$

2) Which is correct?

$$\frac{1}{5} \times 4 = \frac{4}{20}$$

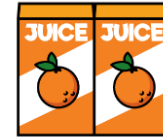
$$\frac{1}{5} \times 4 = \frac{4}{5}$$



$$3) \quad 2\frac{1}{5} = 11 \times \frac{1}{5}$$

$$4) \quad \frac{1}{13} \times 3 = \frac{3}{13}$$

Ron drinks $\frac{2}{9}$ litre of orange juice each day for 3 days.



How much orange juice does Ron drink during the 3 days altogether?

Have a think



$$\frac{2}{9}$$



$$\frac{2}{9}$$



$$\frac{2}{9}$$

$$\frac{2}{9} + \frac{2}{9} + \frac{2}{9} = \frac{6}{9} \text{ litre}$$

$$\frac{2}{9} \times 3 = \frac{6}{9} = \frac{2}{3} \text{ litre}$$

Write the multiplications as repeated additions.

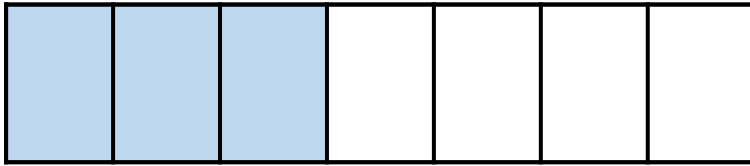
$$\frac{3}{8} \times 3 = \frac{3}{8} + \frac{3}{8} + \frac{3}{8}$$

$$\frac{2}{5} \times 4 = \frac{2}{5} + \frac{2}{5} + \frac{2}{5} + \frac{2}{5}$$

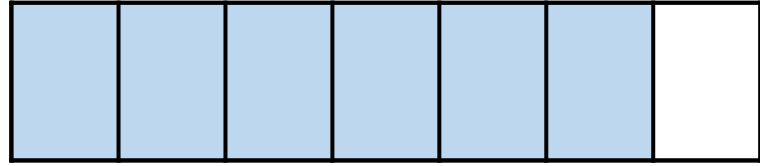
Have a think



$$\frac{1}{7} \times 3 = \frac{3}{7}$$



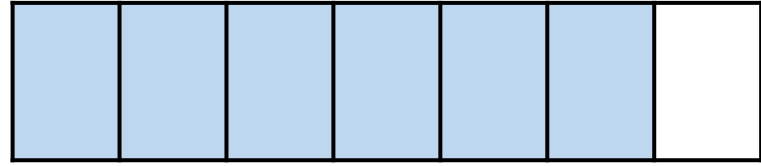
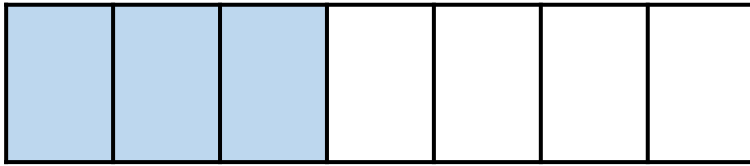
$$\frac{2}{7} \times 3 = \frac{6}{7}$$





$$\frac{1}{7} \times 3 = \frac{3}{7}$$

$$\frac{2}{7} \times 3 = \frac{6}{7}$$



Have a think

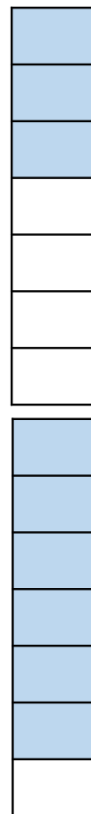


To multiply a fraction by an integer, I multiply the numerator by the integer and the denominator remains the same.

What is different?

$$\frac{1}{7} \times 3 = \frac{3}{7}$$

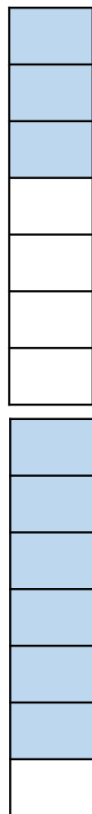
$$\frac{2}{7} \times 3 = \frac{6}{7}$$



To multiply a fraction by an integer, I multiply the _____ by the integer and the _____ remains the same.

$$\frac{1}{7} \times 3 = \frac{3}{7}$$

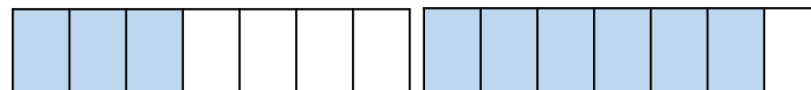
$$\frac{2}{7} \times 3 = \frac{6}{7}$$



To multiply a fraction by an integer, I multiply the _____ by the integer and the _____ remains the same.

$$\frac{1}{7} \times 3 = \frac{3}{7}$$

$$\frac{2}{7} \times 3 = \frac{6}{7}$$

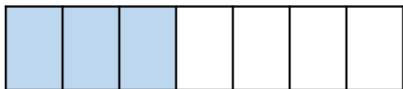


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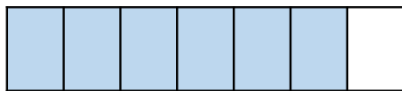


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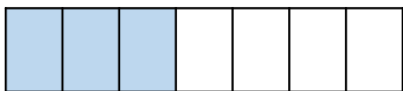


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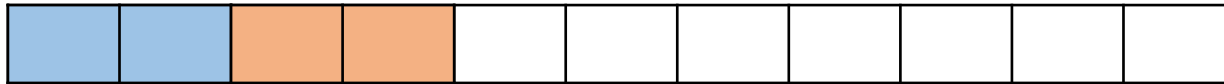
$$\frac{1}{7} \times 3 = \frac{3}{7}$$



To multiply a fraction by an integer, I multiply the _____ by the integer and the _____ remains the same.

Weds

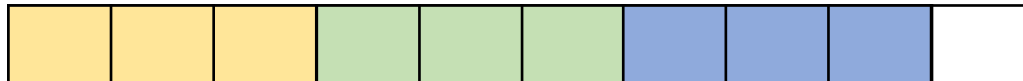
$$\frac{2}{11} + \frac{2}{11} = 2 \times \frac{2}{11} = \frac{4}{11}$$



Have a think



$$\frac{3}{10} \times 3 = \frac{3}{10} + \frac{3}{10} + \frac{3}{10} = \frac{9}{10}$$





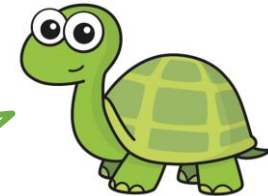
$$\frac{2}{7} \times 3 = \frac{6}{7}$$

Have a think

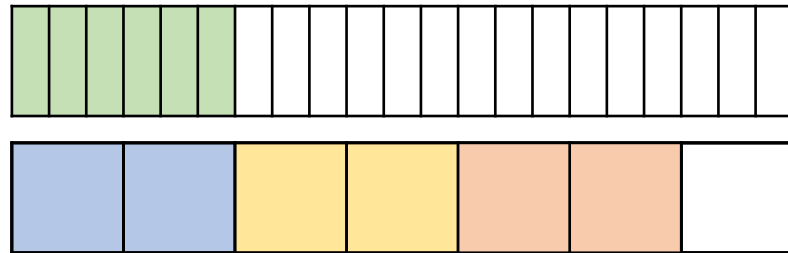


$$2 \times 3 = 6 \text{ and } 7 \times 3 = 21$$

So the answer is $\frac{6}{21}$



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



Explain if Tiny is right or wrong and why!

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

$2 \times 3 = 6$ and $7 \times 3 = 21$
So the answer is $\frac{6}{21}$



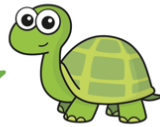
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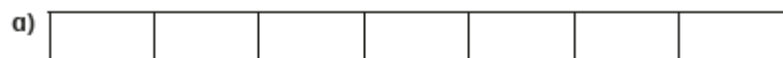
$$\frac{2}{7} \times 3 =$$

$2 \times 3 = 6$ and $7 \times 3 = 21$
So the answer is $\frac{6}{21}$



1 Complete the calculations.

Use the bar models to help you.



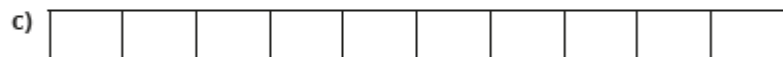
$$\frac{2}{7} + \frac{2}{7} = \boxed{}$$

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



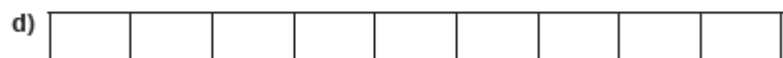
$$\frac{2}{7} + \frac{2}{7} + \frac{2}{7} = \boxed{}$$

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



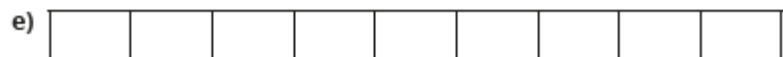
$$\frac{3}{10} + \frac{3}{10} + \frac{3}{10} = \boxed{}$$

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



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

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

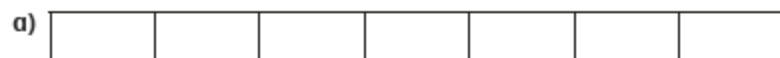


$$\frac{4}{9} + \frac{4}{9} = \boxed{}$$

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

1 Complete the calculations.

Use the bar models to help you.



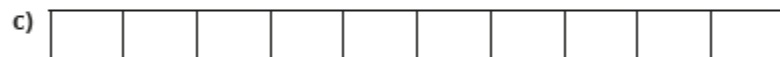
$$\frac{2}{7} + \frac{2}{7} = \boxed{}$$

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



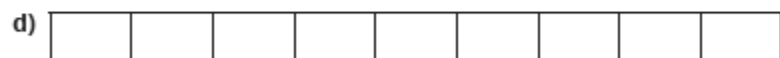
$$\frac{2}{7} + \frac{2}{7} + \frac{2}{7} = \boxed{}$$

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



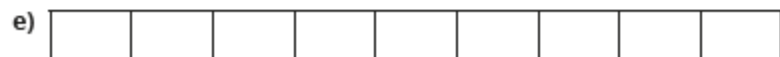
$$\frac{3}{10} + \frac{3}{10} + \frac{3}{10} = \boxed{}$$

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



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

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



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

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



3

Complete the multiplications.

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

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

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

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

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

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

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

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



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?



4

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4

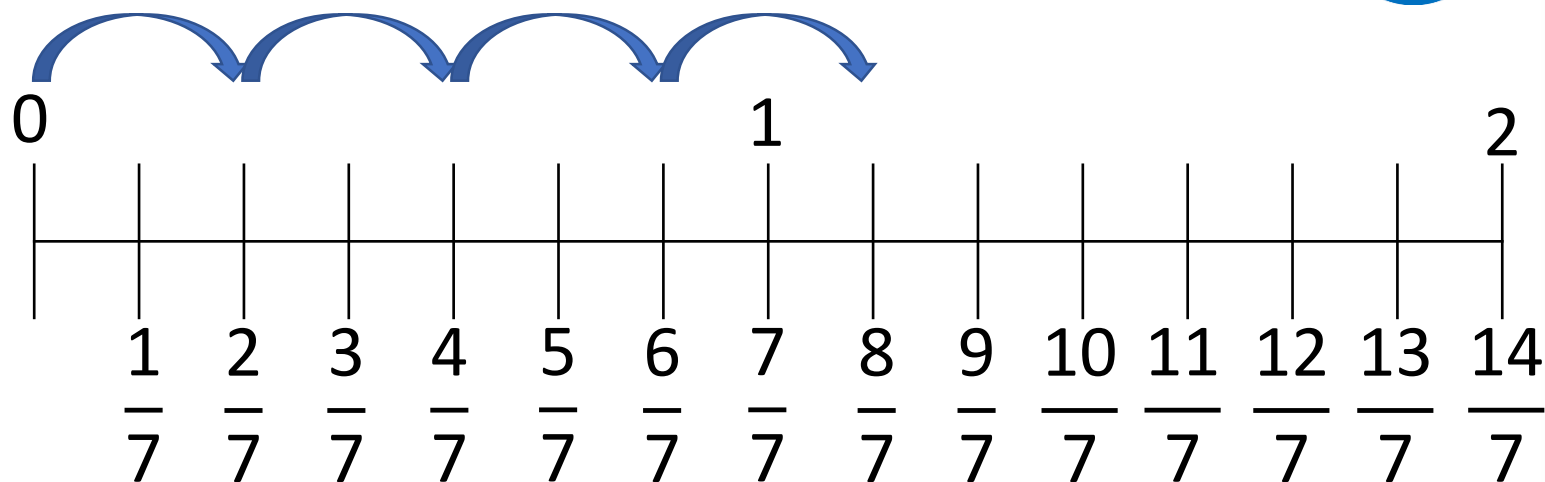
A cat eats $\frac{2}{15}$ of a bag of biscuits a day.

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



$$4 \times \frac{2}{7} = \frac{8}{7} = 1 \frac{1}{7}$$

Have a think



$$13 \times \frac{3}{8} = \frac{39}{8} = 4 \frac{7}{8}$$

Have a think



$$\frac{5}{6} \times 6 = \frac{30}{6} = 5$$

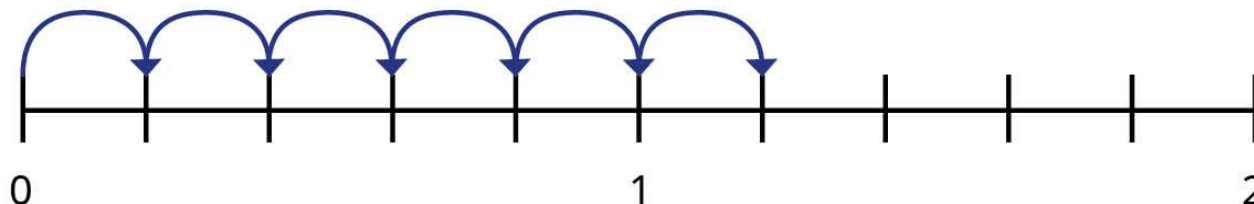
$$\frac{3}{11} \times \boxed{11} = 3 = \frac{33}{11}$$

5 Complete the multiplications.

Use the number lines to help you.

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

a)



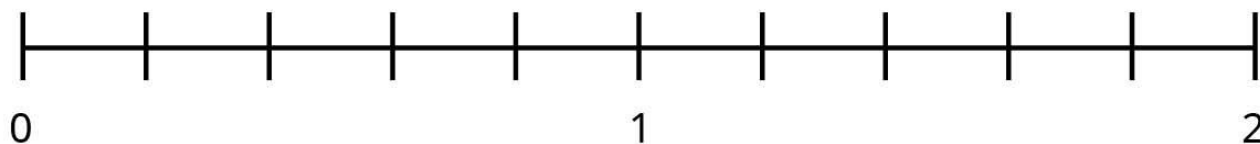
$$6 \times \frac{1}{5} = \boxed{} = \boxed{}$$





5

b)



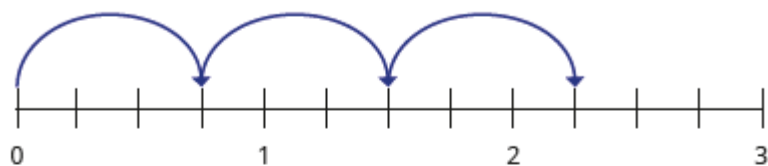
$$9 \times \frac{1}{5} = \boxed{} = \boxed{}$$

5 Complete the multiplications.

Use the number lines to help you.

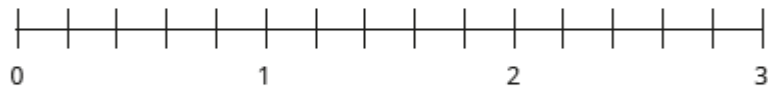
Give each answer as an improper fraction and as a mixed number.

a)



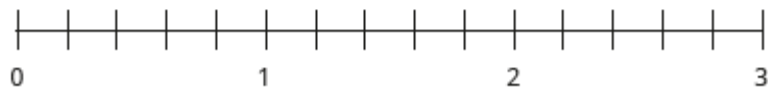
$$3 \times \frac{3}{4} = \boxed{} = \boxed{}$$

b)



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

c)



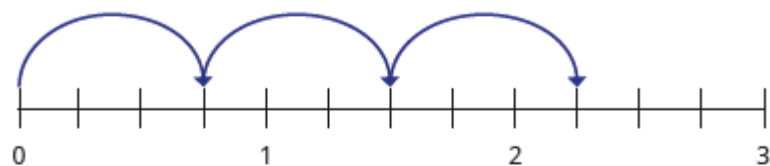
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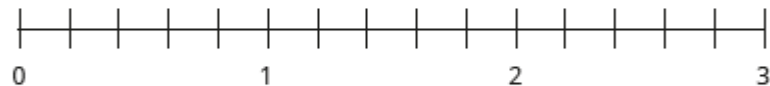
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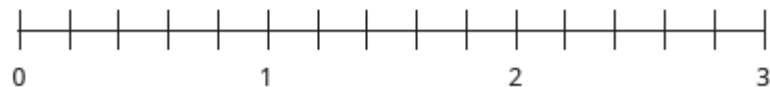
$$3 \times \frac{3}{4} = \boxed{} = \boxed{}$$

b)



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

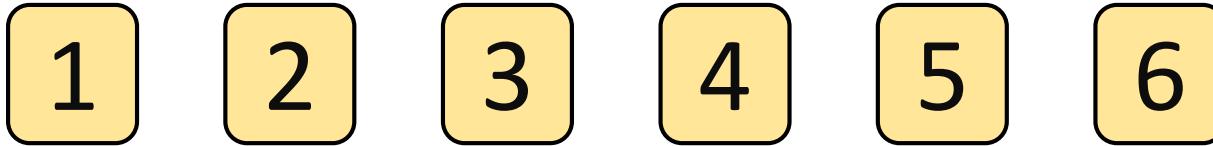
c)



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

Weds

Use the digit cards to complete the multiplication



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

How many other possibilities can you find?

... think



Extension

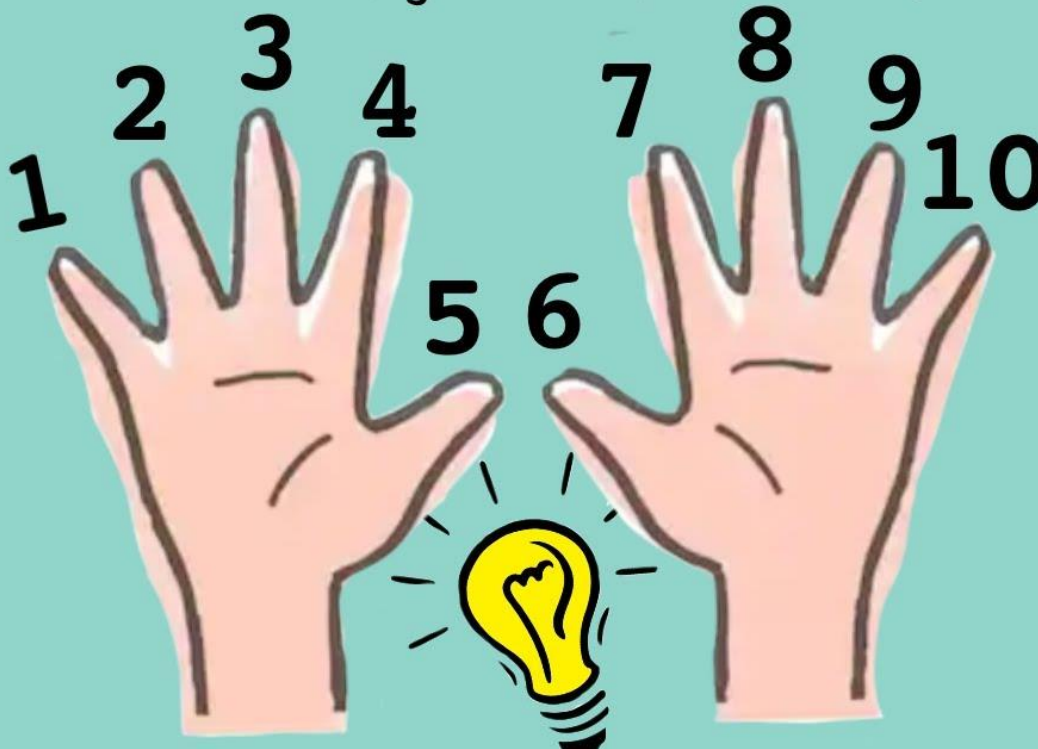
Maths Meeting- Weds

Times table practice x 9



Let's chant them! X 9

Cool & Easy 9 times table math trick!



9 x 1 = 09
9 x 2 = 18
9 x 3 = 27
9 x 4 = 36
9 x 5 = 45
9 x 6 = 54
9 x 7 = 63
9 x 8 = 72
9 x 9 = 81
9 x 10 = 90

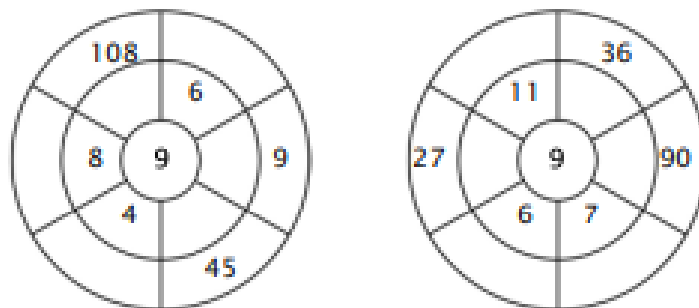
<https://www.youtube.com/watch?v=154VoUQbgvc>

Color in all of the boxes that are the solutions of this time table.

11	79	72	90	8
37	54	54	18	5
9	81	45	27	69
27	90	36	99	65
18	108	59	45	19

Exercise 2:

Complete the circle by multiplying the number in the center by the middle ring to get the outer numbers.



Exercise 3:

Fill in the correct product.

a) $6 \times 9 = \underline{\quad}$

d) $3 \times 9 = \underline{\quad}$

b) $2 \times 9 = \underline{\quad}$

e) $10 \times 9 = \underline{\quad}$

c) $1 \times 9 = \underline{\quad}$

f) $8 \times 9 = \underline{\quad}$

What does
product mean?

Color in all of the boxes that are the solutions of this time table.

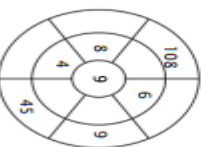
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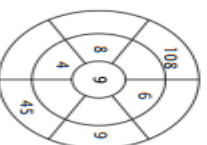
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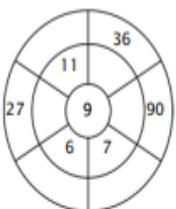
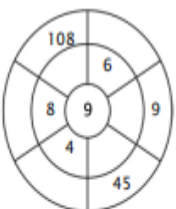
f) $8 \times 9 = \underline{\quad}$

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e) $10 \times 9 = \underline{\quad}$

f) $8 \times 9 = \underline{\quad}$

LO: To multiply a mixed number by an integer

Stick in books-
write True/ false
and explain
why!

True or False ?

Multiply unit fractions
by integers

The multiplications below are all equal to one.

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

$$7 \times \frac{1}{7}$$

$$10 \times \frac{1}{10}$$

True or False?

Multiply unit fractions by integers

The multiplications below are all equal to one.

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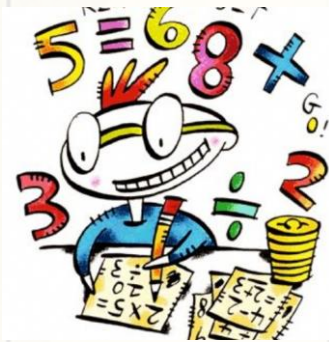
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Maths Three Repeating Golden Threads



Mastery

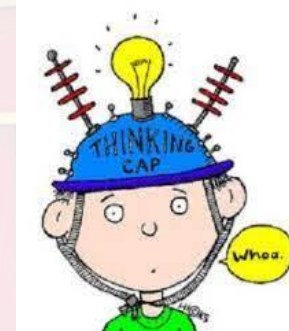
Pupils acquire a deep, long-term, secure adaptable understanding

Fluency

Quick and. efficient recall of facts and procedures

Application

The use of maths everyday in the real world, outside the classroom.



mastery ↔ fluency ↔ application

Term Spring 2 **Week beginning** 20.2.23

Block Multiplication and division (B)

Key vocabulary

Multiplication, division, digit, method, place holder, place value, remainder, partition, links to addition/subtraction, estimate, exchange

	WT	EX	S
Multiply a unit fraction by an integer			
Multiply a non-unit fraction by an integer			
Multiply a mixed number by an integer			
Calculate a fraction of a quantity			
Fraction of an amount			
Find the whole			
Use fractions as operators			

Stem sentences

- To multiply a fraction by an integer, I multiply the ____ by the integer and the ____ remains the same.
- I can partition ____ into ____ and ____.
- To find $\frac{1}{n}$ of ____, I need to divide by ____ and multiply by ____.
- I need to divide by the denominator and multiply by the denominator.
- If ____ is one equal part, all the parts must be ____.
- ____ is a factor of ____, so I can divide ____ by ____.



Crucial Vocab...

mixed number

Integer

multiply

thurs

mixed number
Integer
multiply

mixed number
Integer
multiply

mixed number
Integer
multiply

mixed number
Integer
multiply

mixed number
Integer
multiply

mixed number
Integer
multiply

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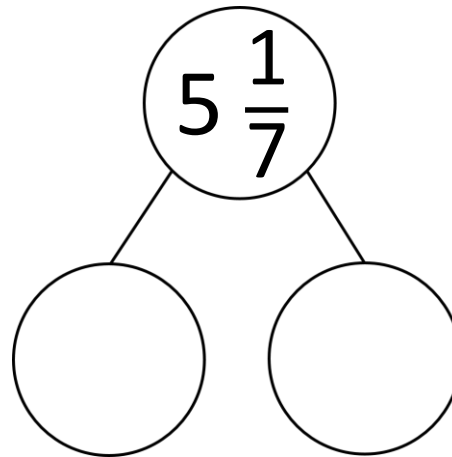
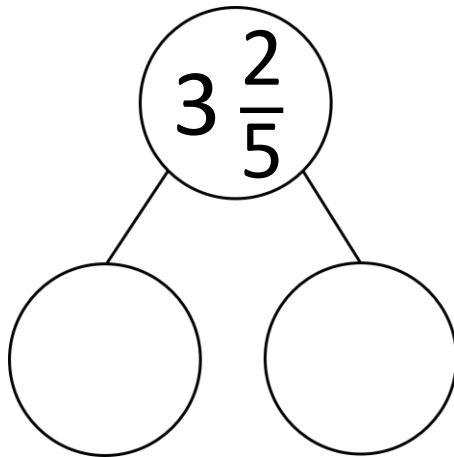
thurs

1) $4 \times \frac{3}{13} =$

Recap

2) $4 \times 2 =$

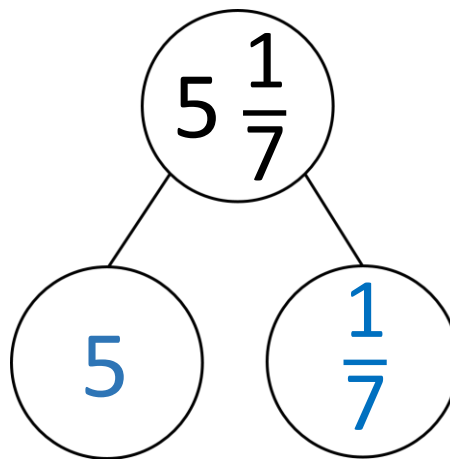
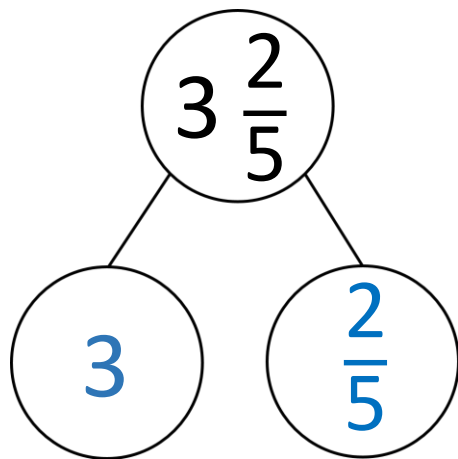
3) Partition the mixed numbers.



1) $4 \times \frac{3}{13} = \frac{12}{13}$

2) $4 \times 2 = 8$

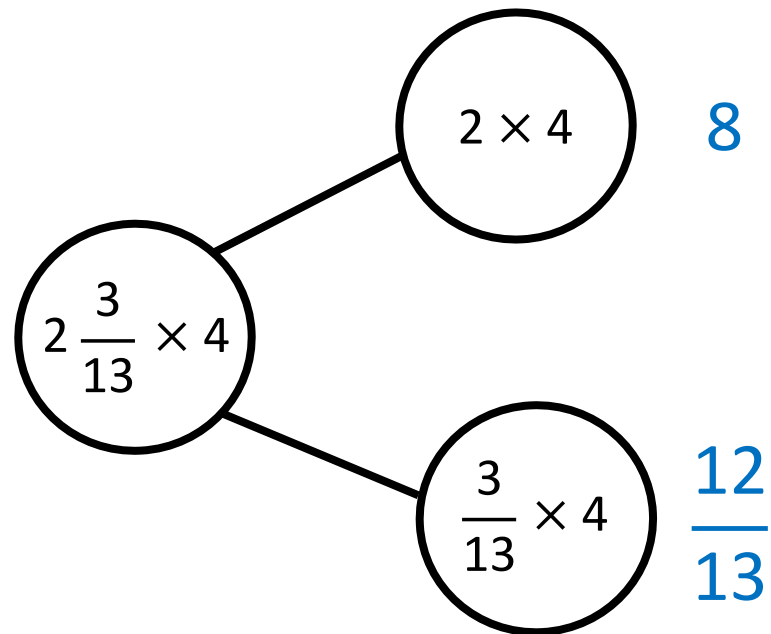
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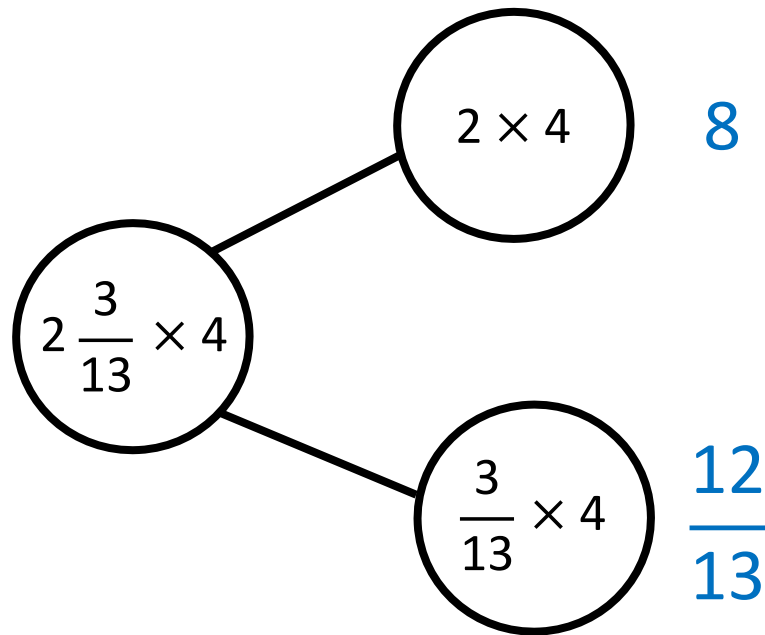


One bottle of milk contains $2\frac{3}{13}$ litres.

How much milk is in 4 bottles? $8\frac{12}{13}$ litres

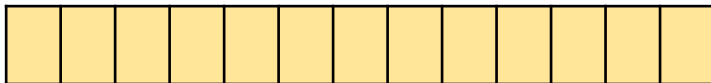
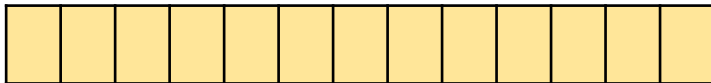
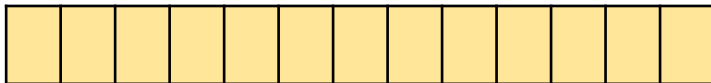
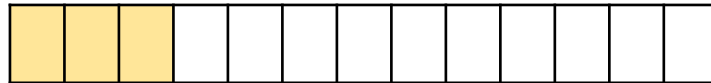
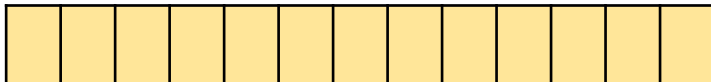
$$2\frac{3}{13} \times 4 =$$





Why is it useful to
partition the mixed
number?

$$4 \times 2 \frac{3}{13} = 8 \frac{12}{13}$$



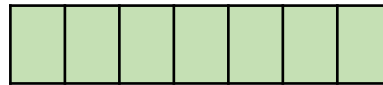
$$3 \times 5 \frac{2}{7} = 15 \frac{6}{7}$$

Have a think

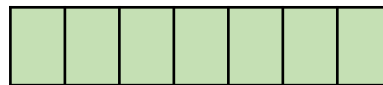
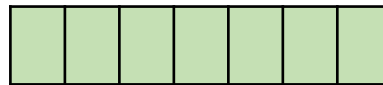


I can partition $5 \frac{2}{7}$ into $\boxed{5}$ and $\boxed{\frac{2}{7}}$

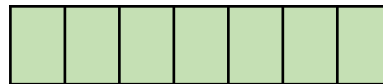
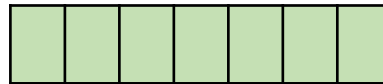
$$3 \times \boxed{5} = 15$$



$$3 \times \boxed{\frac{2}{7}} = \frac{6}{7}$$



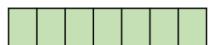
$$\boxed{15} + \boxed{\frac{6}{7}} = 15 \frac{6}{7}$$



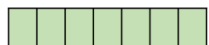
$$3 \times 5 \frac{2}{7} =$$

I can partition $5 \frac{2}{7}$ into and

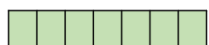
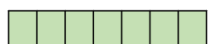
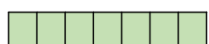
$$3 \times \text{} =$$



$$3 \times \text{} =$$



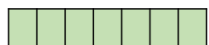
$$\text{} + \text{} =$$



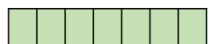
$$3 \times 5 \frac{2}{7} =$$

I can partition $5 \frac{2}{7}$ into and

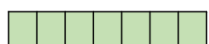
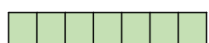
$$3 \times \text{} =$$



$$3 \times \text{} =$$



$$\text{} + \text{} =$$

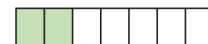
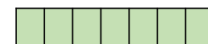


Thurs

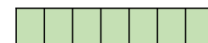
$$3 \times 5 \frac{2}{7} =$$

I can partition $5 \frac{2}{7}$ into and

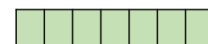
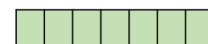
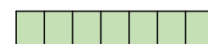
$$3 \times \text{} =$$



$$3 \times \text{} =$$



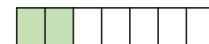
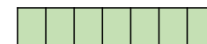
$$\text{} + \text{} =$$



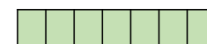
$$3 \times 5 \frac{2}{7} =$$

I can partition $5 \frac{2}{7}$ into and

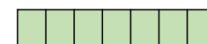
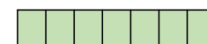
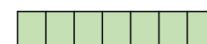
$$3 \times \text{} =$$



$$3 \times \text{} =$$



$$\text{} + \text{} =$$





Your turn

Have a go at questions



Multiply a mixed number by an integer

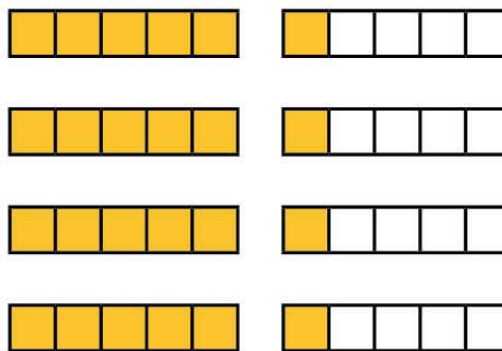
1 Complete the calculations.

a) $4 \times 1\frac{1}{5}$

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

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

$$\boxed{} + \boxed{} = \boxed{}$$

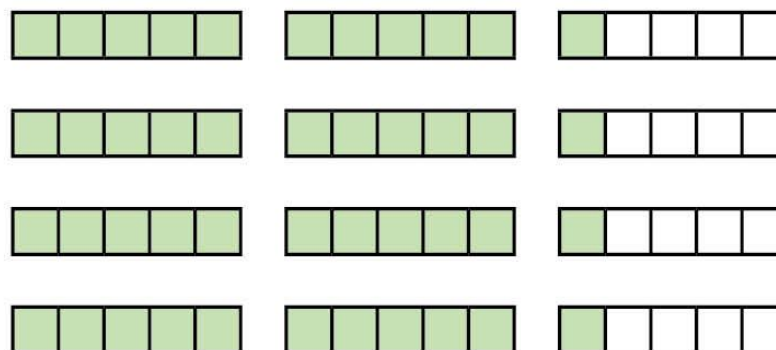


1 b) $4 \times 2\frac{1}{5}$

$$\square \times 2 = \square$$

$$4 \times \square = \square$$

$$\square + \square = \square$$

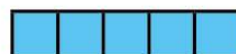
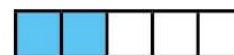
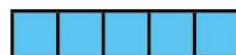
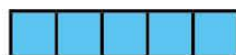
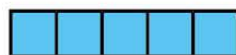


1 c) $4 \times 2\frac{2}{5}$

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

$$4 \times \square = \square = \square$$

$$\square + \square = \square$$

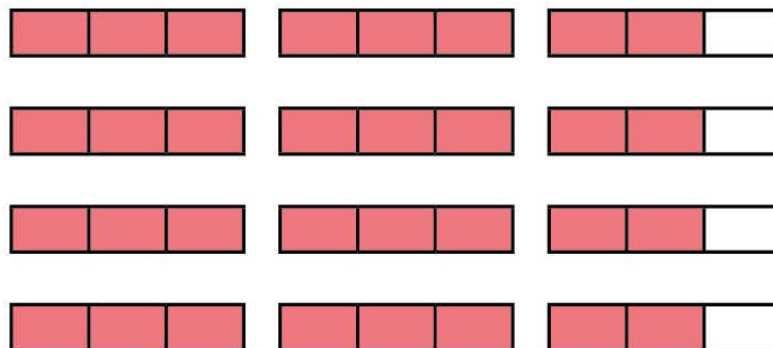


1 d) $4 \times 2\frac{2}{3}$

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

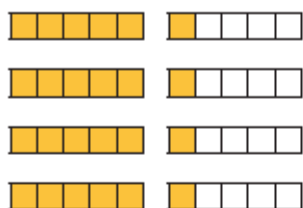
$$\square \times \square = \square = \square$$

$$\square + \square = \square$$

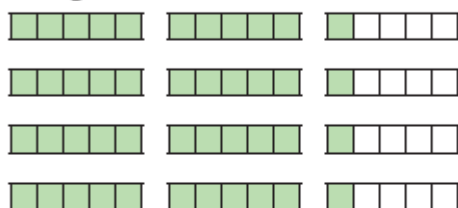


1 Work out the multiplications.

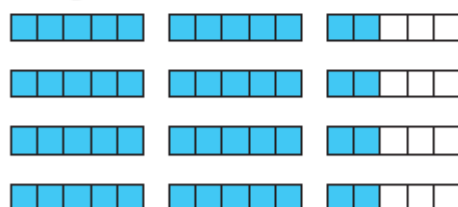
a) $4 \times 1\frac{1}{5}$



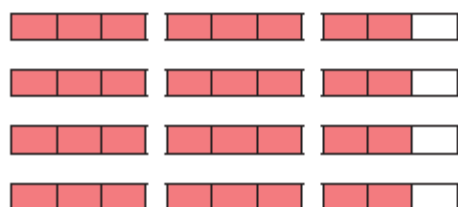
b) $4 \times 2\frac{1}{5}$



c) $4 \times 2\frac{2}{5}$

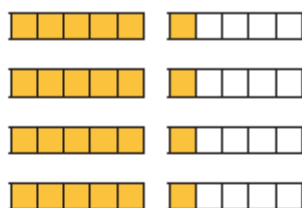


d) $4 \times 2\frac{2}{3}$

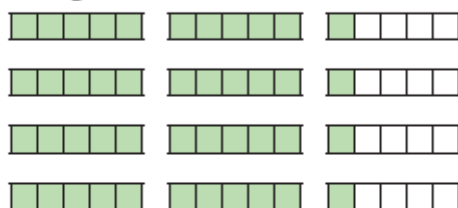


1 Work out the multiplications.

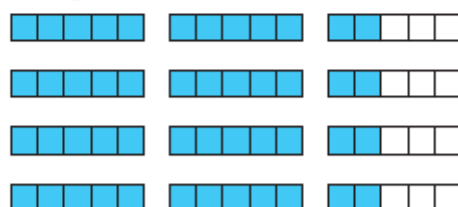
a) $4 \times 1\frac{1}{5}$



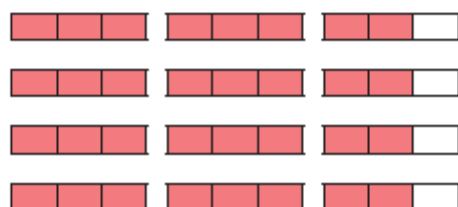
b) $4 \times 2\frac{1}{5}$



c) $4 \times 2\frac{2}{5}$

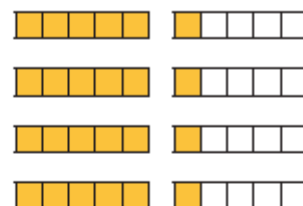


d) $4 \times 2\frac{2}{3}$

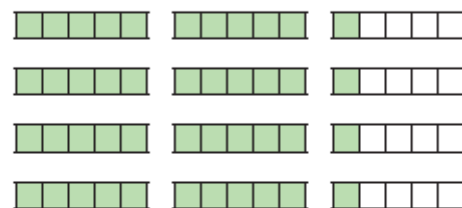


1 Work out the multiplications.

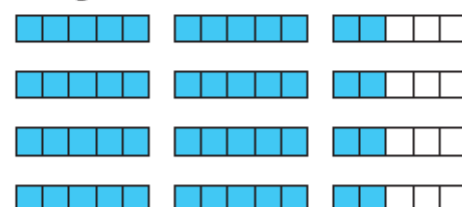
a) $4 \times 1\frac{1}{5}$



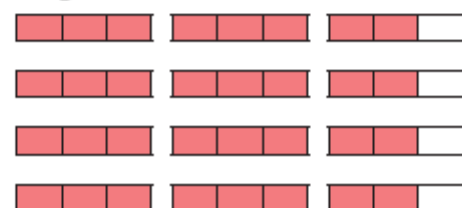
b) $4 \times 2\frac{1}{5}$



c) $4 \times 2\frac{2}{5}$



d) $4 \times 2\frac{2}{3}$



Multiply a mixed number by an integer

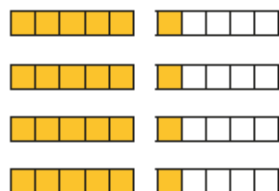
1 Complete the calculations.

a) $4 \times 1\frac{1}{5}$

$4 \times 1 = \square$

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

$\square + \square = \square$

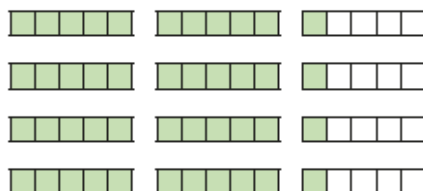


b) $4 \times 2\frac{1}{5}$

$\square \times 2 = \square$

$4 \times \square = \square$

$\square + \square = \square$

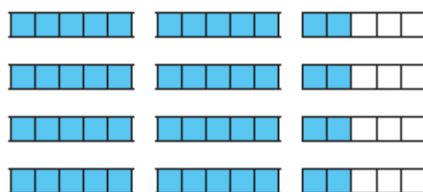


c) $4 \times 2\frac{2}{5}$

$\square \times \square = \square$

$4 \times \square = \square = \square$

$\square + \square = \square$

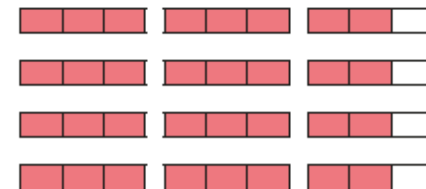


d) $4 \times 2\frac{2}{3}$

$\square \times \square = \square$

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

$\square + \square = \square$



2 Complete the multiplications.

a) $3 \times 8\frac{2}{7} = \square$

b) $2 \times 12\frac{2}{11} = \square$

c) $6\frac{2}{11} \times 4 = \square$

Draw on the
sheet if this helps

S grp

2

Complete the multiplications.

a) $3 \times 8\frac{2}{7} =$

d) $4 \times 6\frac{3}{19} =$

b) $2 \times 12\frac{2}{11} =$

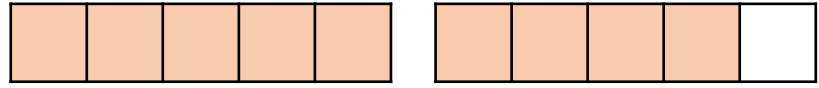
e) $2\frac{2}{25} \times 12 =$

c) $6\frac{2}{11} \times 4 =$

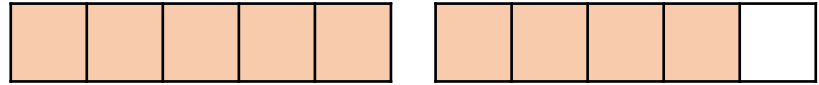
f) $3\frac{1}{15} \times 8 =$



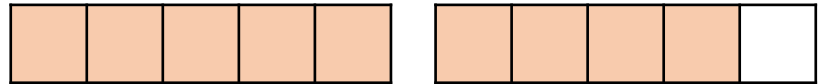
$$1 \frac{4}{5} \times 4 = 7 \frac{1}{5}$$



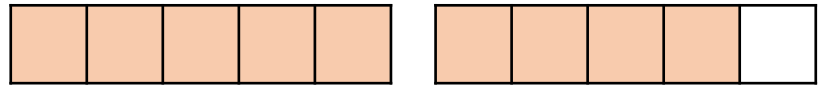
$$4 \times 1 = 4$$



$$4 \times \frac{4}{5} = \frac{16}{5}$$



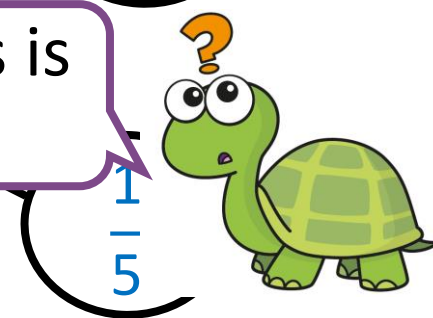
$$4 + \frac{16}{5} = 4 \frac{16}{5}$$



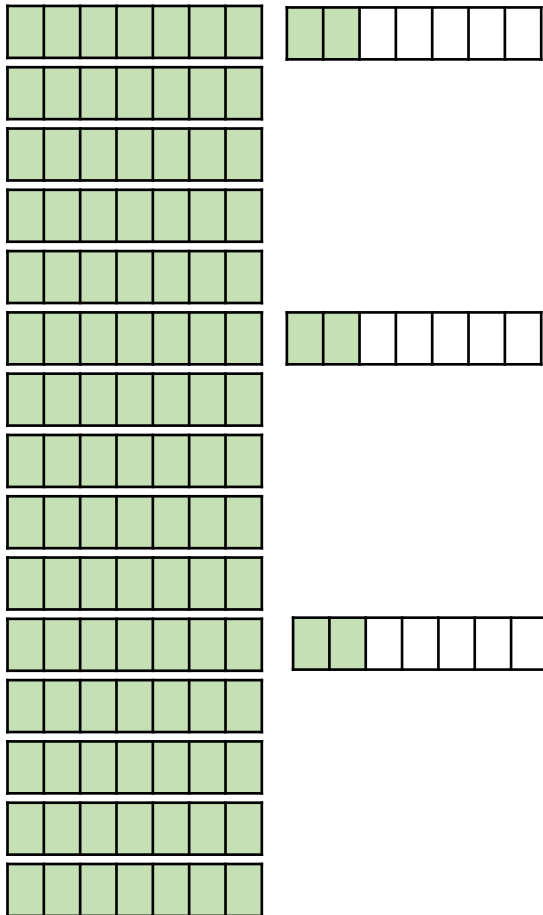
$$4 + 3 \frac{1}{5} = 7 \frac{1}{5}$$

I don't think this is correct.

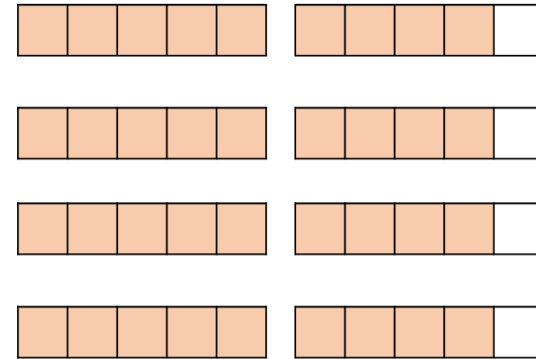
$$15 \frac{3}{5}$$



$$3 \times 5 \frac{2}{7} = 15 \frac{6}{7}$$



$$1 \frac{4}{5} \times 4 = 7 \frac{1}{5}$$



What is the same?

What is different?

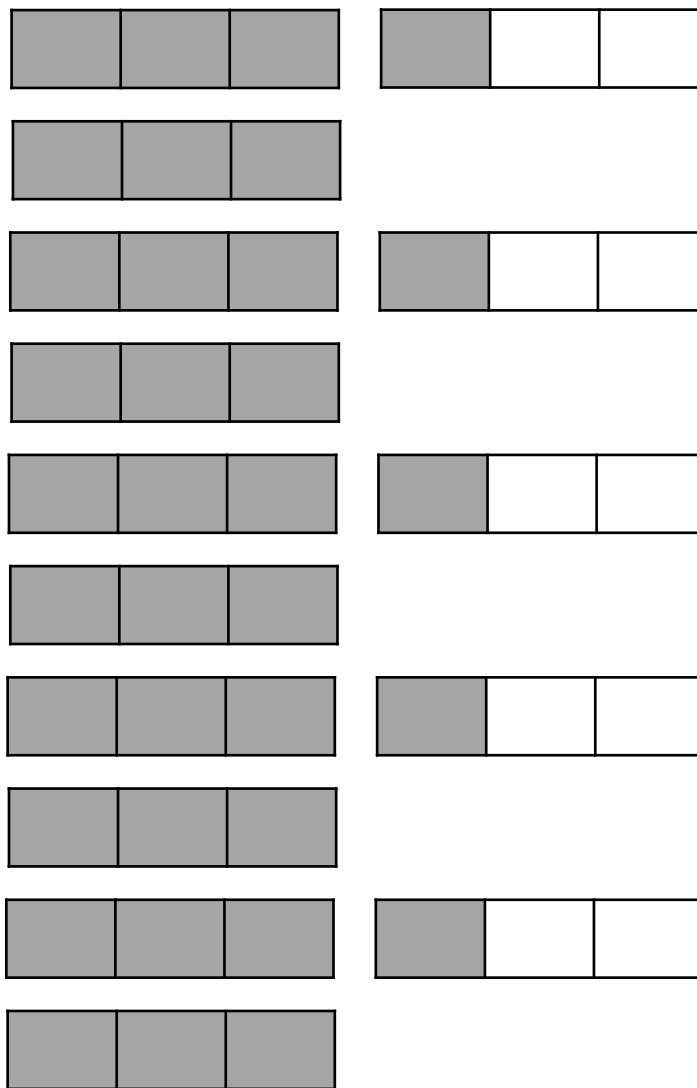
$$2\frac{1}{3} \times 5 = 11\frac{2}{3}$$

$$5 \times \boxed{2} = 10$$

$$5 \times \boxed{\frac{1}{3}} = \boxed{\frac{5}{3}} = \boxed{1\frac{2}{3}}$$

$$\boxed{10} + \boxed{1\frac{2}{3}} = 11\frac{2}{3}$$

Have a think 



4

Complete the calculations.

a) $5 \times 2\frac{2}{3} = 10 + \frac{10}{3} = \boxed{}$

b) $4\frac{3}{7} \times 5 = 20 + \boxed{} = \boxed{}$

c) $8 \times 2\frac{5}{12} = \boxed{} + \boxed{} = \boxed{}$

d) $7 \times 3\frac{1}{5} = \boxed{} + \boxed{} = \boxed{}$

e) $4\frac{2}{9} \times 8 = \boxed{} + \boxed{} = \boxed{}$

f) $11 \times 4\frac{3}{10} = \boxed{} + \boxed{} = \boxed{}$

4 Complete the calculations.

a) $5 \times 2\frac{2}{3} = 10 + \frac{10}{3} =$

b) $4\frac{3}{7} \times 5 = 20 +$ $=$

c) $8 \times 2\frac{5}{12} =$ $+$ $=$

d) $7 \times 3\frac{1}{5} =$ $+$ $=$

e) $4\frac{2}{9} \times 8 =$ $+$ $=$

f) $11 \times 4\frac{3}{10} =$ $+$ $=$

4 Complete the calculations.

a) $5 \times 2\frac{2}{3} = 10 + \frac{10}{3} =$

b) $4\frac{3}{7} \times 5 = 20 +$ $=$

c) $8 \times 2\frac{5}{12} =$ $+$ $=$

d) $7 \times 3\frac{1}{5} =$ $+$ $=$

e) $4\frac{2}{9} \times 8 =$ $+$ $=$

f) $11 \times 4\frac{3}{10} =$ $+$ $=$

4 Complete the calculations.

a) $5 \times 2\frac{2}{3} = 10 + \frac{10}{3} =$

b) $4\frac{3}{7} \times 5 = 20 +$ $=$

c) $8 \times 2\frac{5}{12} =$ $+$ $=$

d) $7 \times 3\frac{1}{5} =$ $+$ $=$

e) $4\frac{2}{9} \times 8 =$ $+$ $=$

f) $11 \times 4\frac{3}{10} =$ $+$ $=$

4 Complete the calculations.

a) $5 \times 2\frac{2}{3} = 10 + \frac{10}{3} =$

b) $4\frac{3}{7} \times 5 = 20 +$ $=$

c) $8 \times 2\frac{5}{12} =$ $+$ $=$

d) $7 \times 3\frac{1}{5} =$ $+$ $=$

e) $4\frac{2}{9} \times 8 =$ $+$ $=$

f) $11 \times 4\frac{3}{10} =$ $+$ $=$

$$2\frac{5}{8} \times \boxed{4} = 10\frac{1}{2}$$

$$2\frac{5}{8} \times \boxed{4} = 10\frac{4}{8}$$

$$\frac{21}{8} \times \boxed{4} = \frac{84}{8}$$

$$\boxed{8} \times 1\frac{1}{6} = 9\frac{1}{3}$$

Have a think

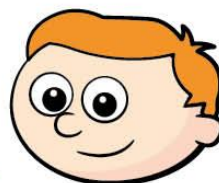


$$\boxed{8} \times 1\frac{1}{6} = 9\frac{2}{6}$$

$$\boxed{8} \times \frac{7}{6} = \frac{56}{6}$$

5

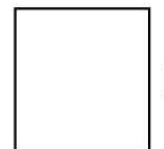
$$5 \times 3\frac{2}{11} \text{ is equal to } 3 \times 5\frac{2}{11}$$



Do you agree with Ron? _____

Explain your answer.

- 6 Eva drinks $3\frac{1}{3}$ litres of water every day.
How many litres of water does she drink in a week?





- 7** **b)** Dora makes four cakes.

How much more butter does she use than sugar?

kg

5

$$5 \times 3\frac{2}{11} \text{ is equal to } 3 \times 5\frac{2}{11}$$



Do you agree with Ron?
Explain your answer.

6

Eva drinks $3\frac{1}{3}$ litres of water every day.
How many litres of water does she drink in a week?

5

$$5 \times 3\frac{2}{11} \text{ is equal to } 3 \times 5\frac{2}{11}$$



Do you agree with Ron?
Explain your answer.

6

Eva drinks $3\frac{1}{3}$ litres of water every day.
How many litres of water does she drink in a week?

5

$$5 \times 3\frac{2}{11} \text{ is equal to } 3 \times 5\frac{2}{11}$$



Do you agree with Ron?
Explain your answer.

6

Eva drinks $3\frac{1}{3}$ litres of water every day.
How many litres of water does she drink in a week?

5

$$5 \times 3\frac{2}{11} \text{ is equal to } 3 \times 5\frac{2}{11}$$



Do you agree with Ron?
Explain your answer.

6

Eva drinks $3\frac{1}{3}$ litres of water every day.
How many litres of water does she drink in a week?

5

$$5 \times 3\frac{2}{11} \text{ is equal to } 3 \times 5\frac{2}{11}$$



Do you agree with Ron?
Explain your answer.

6

Eva drinks $3\frac{1}{3}$ litres of water every day.
How many litres of water does she drink in a week?

Thurs

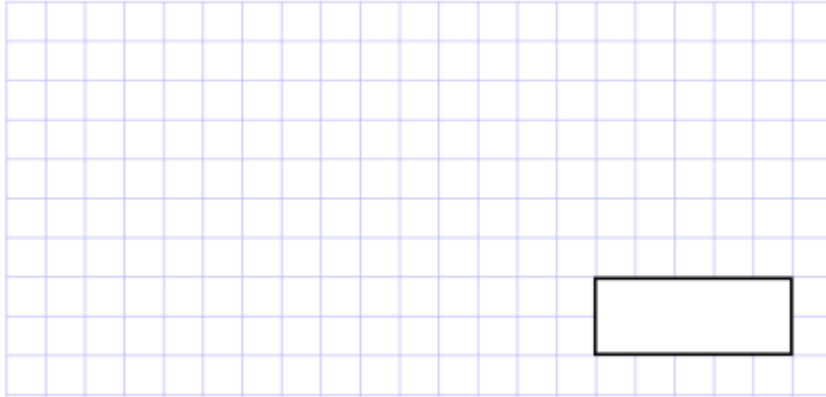
Maths Meeting- Thurs

Recap- adding and subtracting fractions



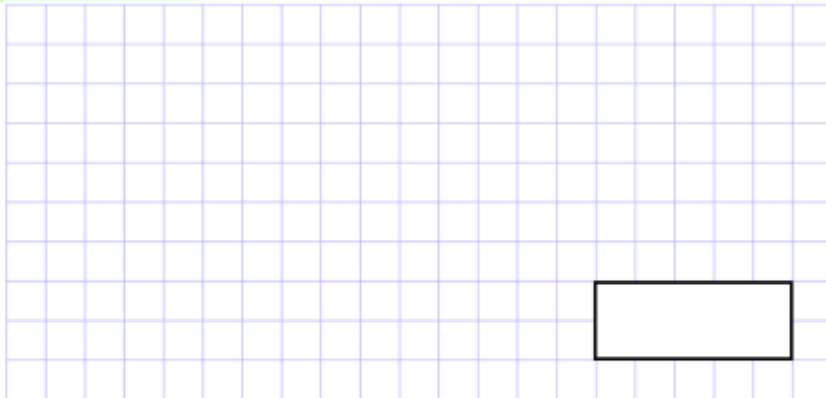
1.

$$\frac{2}{3} + \frac{1}{6}$$



2.

$$\frac{3}{8} - \frac{1}{4}$$



3.

$$\frac{7}{20} + \frac{2}{5}$$

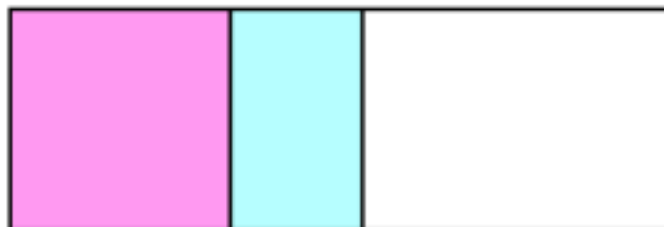


How would
you
solve
these?

In this rectangle

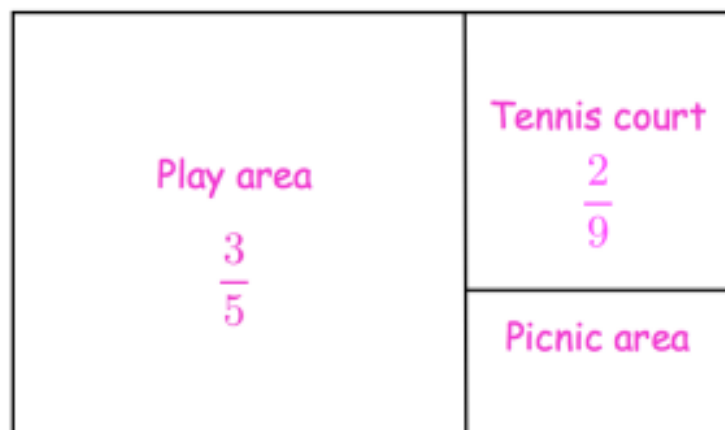
$\frac{1}{3}$ is shaded pink

$\frac{1}{5}$ is shaded blue



What fraction of the rectangle is **not shaded**?

18. This diagram shows a park.

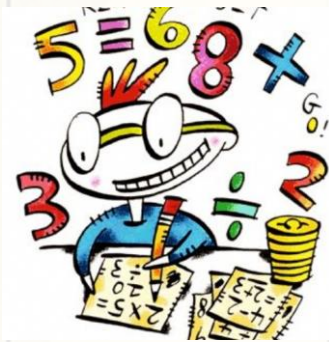


Work out the fraction of the park that is the picnic area

Fri 23.2.24

LO: Mental arithmetic practice- multiplication and division revision

Maths Three Repeating Golden Threads



Mastery

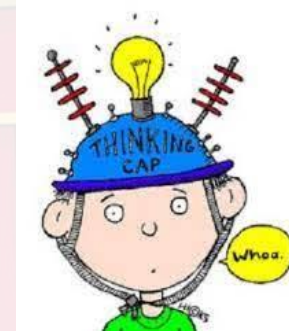
Pupils acquire a deep, long-term, secure adaptable understanding

Fluency

Quick and. efficient recall of facts and procedures

Application

The use of maths everyday in the real world, outside the classroom.



Maths Meeting- Key skills

