

Mon: LO: To subtract from a mixed number - breaking the whole

Tues: LO: To subtract two mixed numbers

Weds: End of block assessment

Thurs: To multiply up to a 4-digit number by a 1-digit number

Fri: To multiply a 2-digit number by a 2-digit number (area model)

Time 12/24 differences

Times tables x 11 x 12

Time intervals

Spring 1 2024 Week 2

White Rose
MATHS

LO: To subtract from a mixed number - breaking the whole

LO: To subtract two mixed numbers

End of block assessment

To multiply up to a 4-digit number by a 1-digit number

To multiply a 2-digit number by a 2-digit number (area model)

LO: To subtract from a mixed number - breaking the whole

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To multiply up to a 4-digit number by a 1-digit number

To multiply a 2-digit number by a 2-digit number (area model)

LO: To subtract from a mixed number - breaking the whole

LO: To subtract two mixed numbers

End of block assessment

To multiply up to a 4-digit number by a 1-digit number

To multiply a 2-digit number by a 2-digit number (area model)

Mon 15/1/24 LO: To subtract from a mixed number - breaking the whole

1) $1 = \frac{5}{\square}$

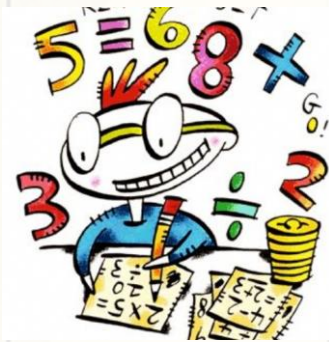
Recap...whiteboards

2) $4 = \frac{\square}{3}$

3) $6 \frac{1}{2} - \frac{5}{12} =$

4) $2 - \frac{1}{3} =$

Maths Three Repeating Golden Threads



Mastery

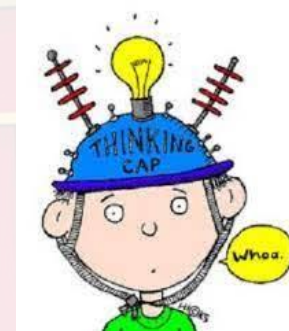
Pupils acquire a deep, long-term, secure adaptable understanding

Fluency

Quick and. efficient recall of facts and procedures

Application

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



Term Autumn 2

Week beginning 4.12.23

Block Fractions A

Key vocabulary numerator convert
improper denominator equivalent mixed
number order compare

	WT	EX	S
To compare and order fractions greater than 1			
To add and subtract fractions with same denominator			
To add fractions within 1			
To add fractions with total greater than 1			
Add to a mixed number			
Add two mixed numbers			
Subtract fractions			
Subtract from a mixed number			
Subtract two mixed numbers			

Stem sentences

- If the number of wholes is different, then the number with wholes is greater.
- If the number of wholes is equal, then I need to compare the
- When adding/subtracting fractions with the same denominators, I just add/subtract the
- Fractions must have the same before you can add them.
- The denominator has been multiplied by , so the numerator needs to be multiplied by for the fractions to be equivalent

Crucial Vocab...

break the whole
subtract
equivalent
mixed number

break the whole
subtract
equivalent
mixed number

break the whole
subtract
equivalent
mixed number

break the whole
subtract
equivalent
mixed number

break the whole
subtract
equivalent
mixed number

break the whole
subtract
equivalent
mixed number

break the whole
subtract
equivalent
mixed number

break the whole
subtract
equivalent
mixed number

break the whole
subtract
equivalent
mixed number

$$1) \quad 1 = \frac{5}{\boxed{}}$$

$$2) \quad 4 = \frac{\boxed{}}{3}$$

$$3) \quad 6 \frac{1}{2} - \frac{5}{12} =$$

$$4) \quad 2 - \frac{1}{3} =$$

Recap...whiteboards

$$1) \quad 1 = \frac{5}{\boxed{5}}$$

$$2) \quad 4 = \frac{\boxed{12}}{3}$$

$$3) \quad 6 \frac{1}{2} - \frac{5}{12} = 6 \frac{6}{12} - \frac{5}{12} = 6 \frac{1}{12}$$

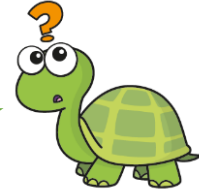
$$4) \quad 2 - \frac{1}{3} = 1 \frac{2}{3}$$

Discuss...in books



I don't think it's possible to calculate

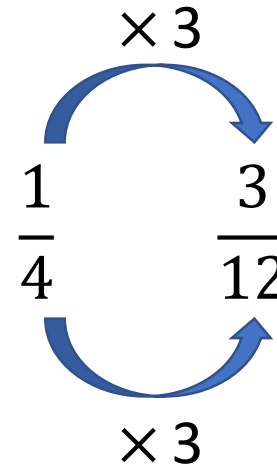
$$2\frac{1}{4} - \frac{5}{12}$$



$$2\frac{1}{4} - \frac{5}{12}$$

$$2\frac{3}{12}$$

$$2\frac{3}{12} - \frac{5}{12}$$



Have a think



I don't think it's possible to calculate

$$2\frac{1}{4} - \frac{5}{12}$$


I don't think it's possible to calculate

$$2\frac{1}{4} - \frac{5}{12}$$


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$$2\frac{1}{4} - \frac{5}{12}$$

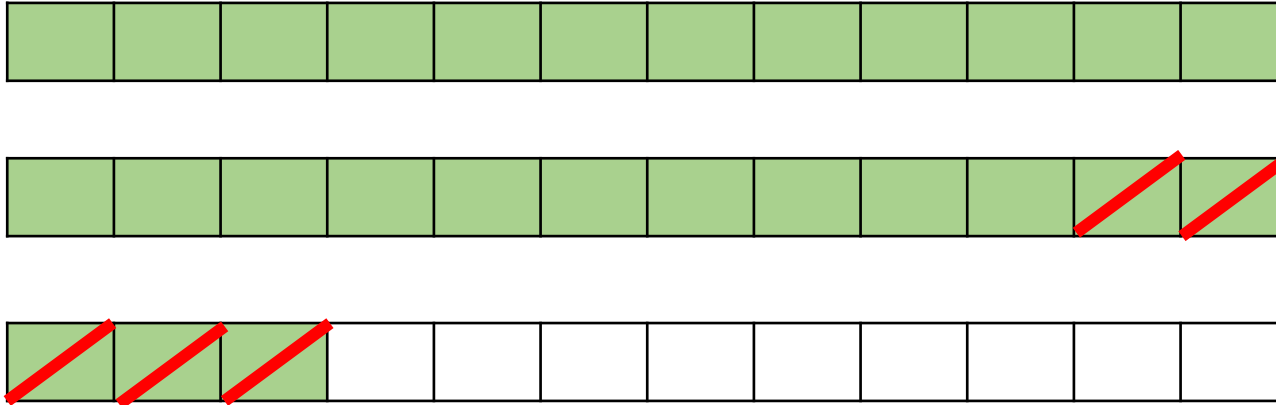

I don't think it's possible to calculate

$$2\frac{1}{4} - \frac{5}{12}$$


Mon

Model...

$$2\frac{3}{12} - \frac{5}{12}$$



$$2\frac{3}{12} - \frac{5}{12}$$

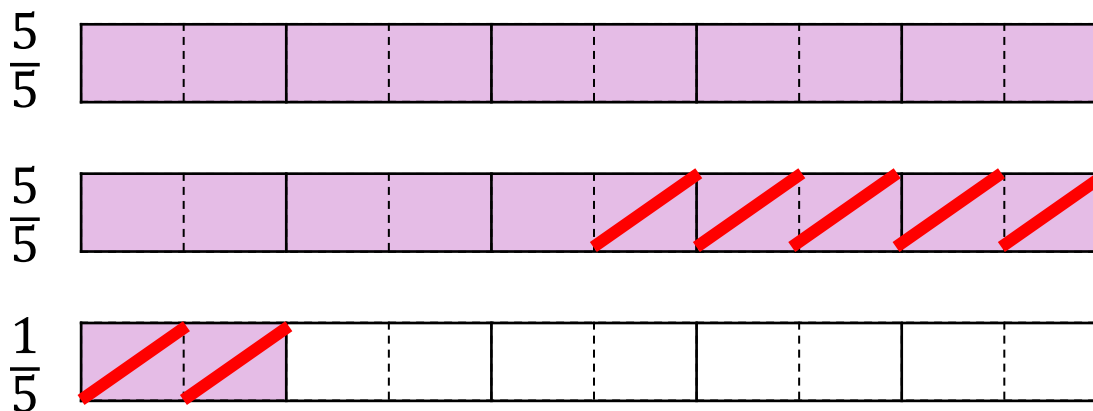
$\swarrow \quad \searrow$
 $\frac{3}{12} \quad \frac{2}{12}$

$$2\frac{3}{12} - \frac{3}{12} = 2$$

$$2 - \frac{2}{12} = 1\frac{10}{12} = 1\frac{5}{6}$$

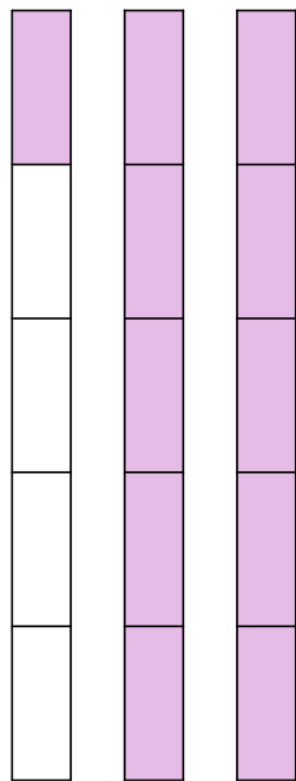


$$2\frac{1}{5} - \frac{7}{10} = 1\frac{5}{10}$$

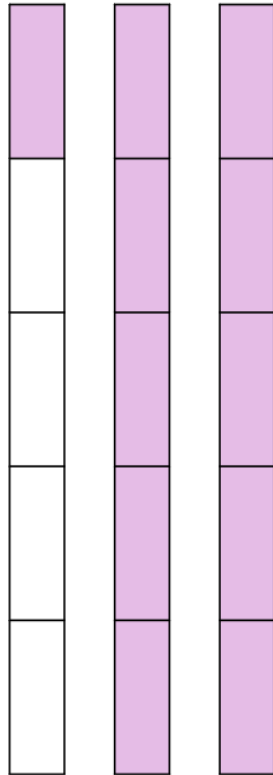


$$2\frac{1}{5} = \frac{11}{5} \xrightarrow{\times 2} \frac{22}{10} - \frac{7}{10} = \frac{15}{10} = 1\frac{5}{10}$$

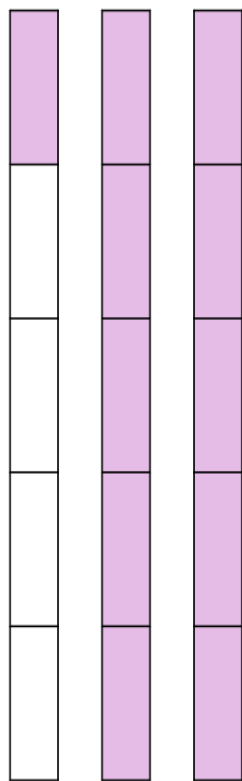
$$2\frac{1}{5} - \frac{7}{10} =$$



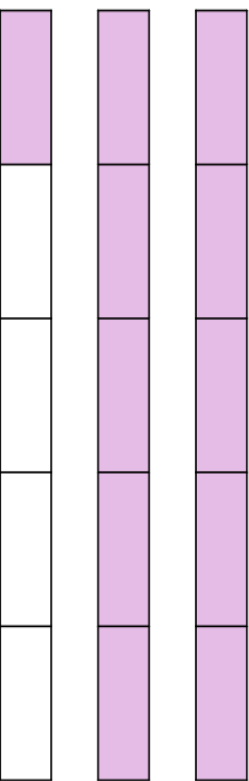
$$2\frac{1}{5} - \frac{7}{10} =$$



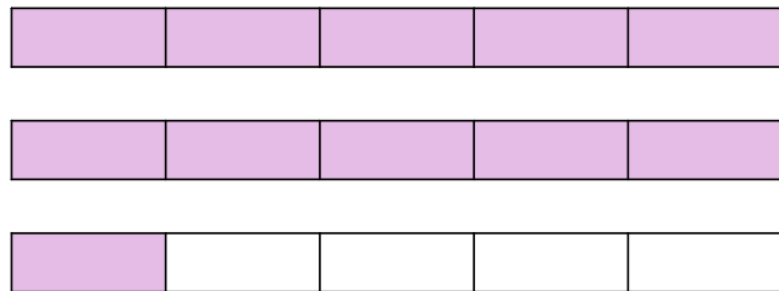
$$2\frac{1}{5} - \frac{7}{10} =$$



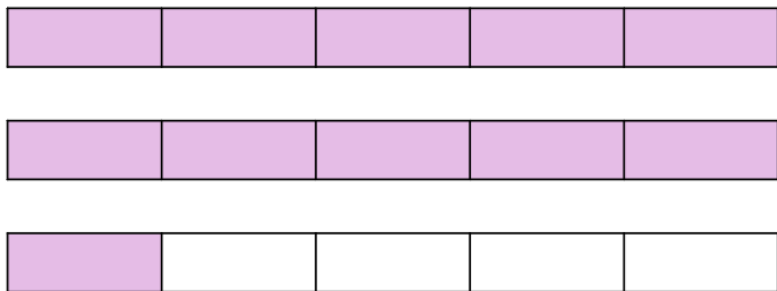
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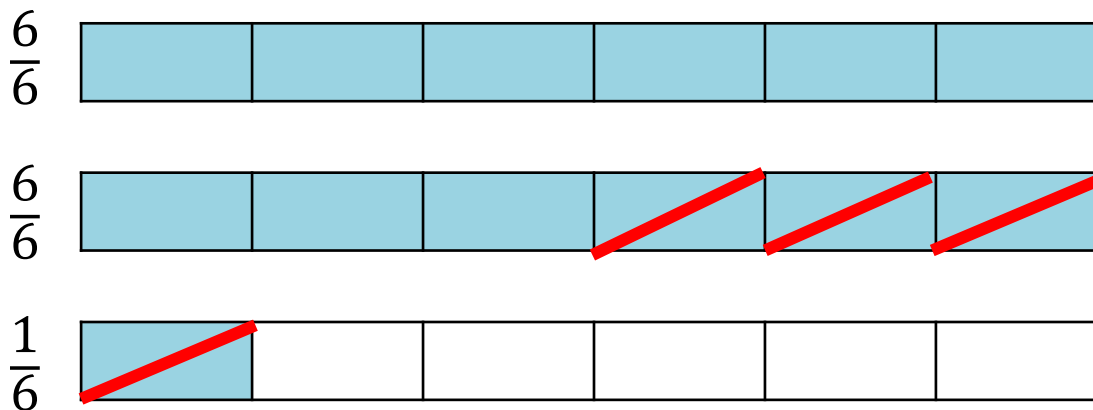


$$2\frac{1}{5} - \frac{7}{10} =$$



Mon

$$2\frac{1}{6} - \frac{2}{3} = 1\frac{3}{6}$$



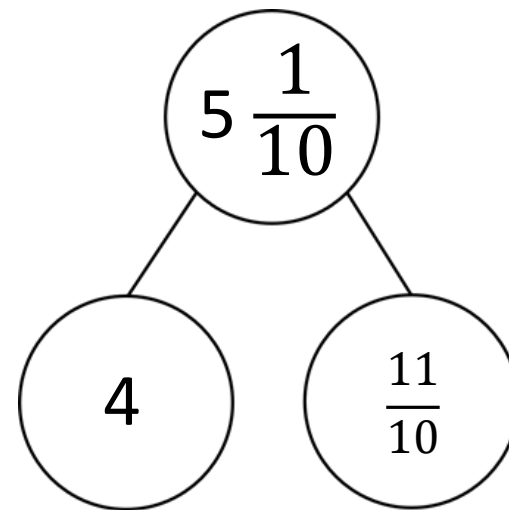
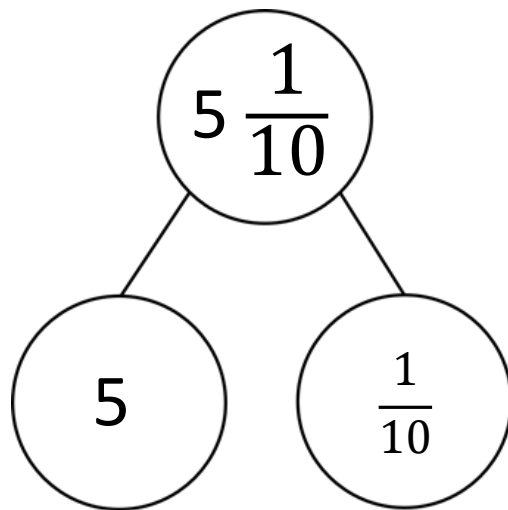
$$\frac{2}{3} = \frac{4}{6}$$

$$2\frac{1}{6} = \frac{13}{6} - \frac{4}{6} = \frac{9}{6} = 1\frac{3}{6}$$

$$5\frac{1}{10} - \frac{4}{5} =$$

$5\frac{1}{10}$ can be partitioned into 5 and $\frac{1}{10}$ or

4 and $\frac{11}{10}$



$$5\frac{1}{10} - \frac{4}{5} = 4\frac{3}{10}$$

$5\frac{1}{10}$ can be partitioned into 5 and $\frac{1}{10}$ or

$$\underline{4} \text{ and } \underline{\frac{11}{10}}$$

$$\frac{4}{5} = \frac{8}{10}$$

$$4\frac{11}{10} - \frac{8}{10} = 4\frac{3}{10}$$



Subtract from a mixed number – breaking the whole

1 Complete the subtractions.

Use the bar models to help you.

a)

$$2\frac{1}{2} - \frac{7}{12} = \boxed{}$$





1

b)

$$2\frac{1}{3} - \frac{7}{12} = \boxed{}$$

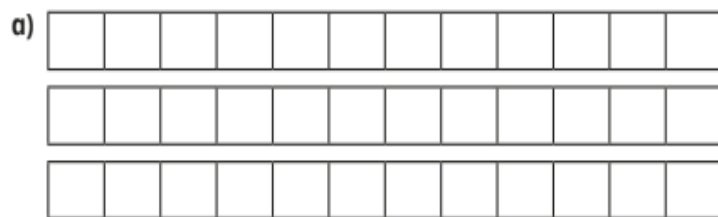
c)

$$2\frac{1}{4} - \frac{7}{12} = \boxed{}$$

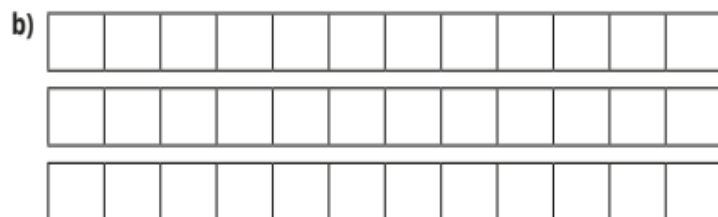
1

Complete the subtractions.

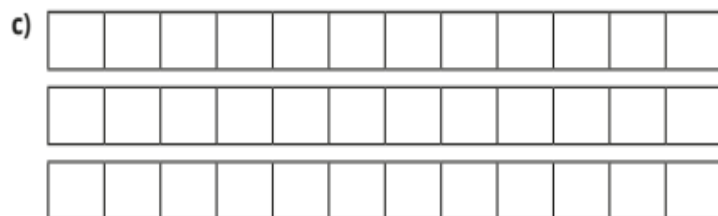
Use the bar models to help you.



$$2\frac{1}{2} - \frac{7}{12} = \boxed{}$$



$$2\frac{1}{3} - \frac{7}{12} = \boxed{}$$

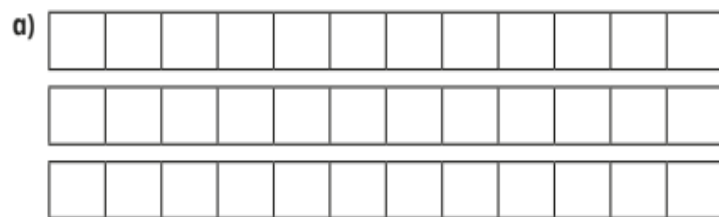


$$2\frac{1}{4} - \frac{7}{12} = \boxed{}$$

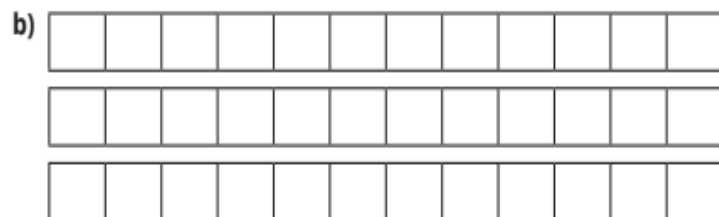
1

Complete the subtractions.

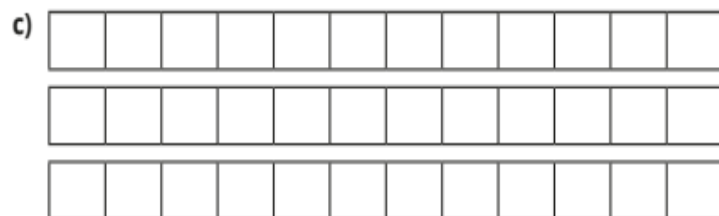
Use the bar models to help you.



$$2\frac{1}{2} - \frac{7}{12} = \boxed{}$$



$$2\frac{1}{3} - \frac{7}{12} = \boxed{}$$



$$2\frac{1}{4} - \frac{7}{12} = \boxed{}$$



2

a) Complete the subtractions.

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

$$3\frac{1}{4} - \frac{2}{8} = \boxed{}$$

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

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

b) At what point did the answer break the whole? Why?



3 Complete the subtractions.

a) $3\frac{1}{5} - \frac{7}{15} =$

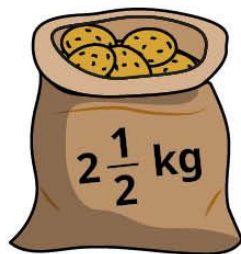
b) $3\frac{1}{16} - \frac{5}{8} =$

c) $4\frac{5}{12} - \frac{5}{6} =$

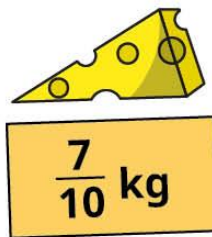


4

Here are some ingredients.



potatoes



cheese



carrots

a) How much heavier are the carrots than the cheese?

 kg

b) Jack uses $\frac{17}{20}$ kg of carrots.

How many kilograms of carrots does he have left?

 kg

c) Jack uses all the cheese and the same amount of potatoes.

What is the mass of the leftover potatoes?

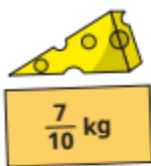
 kg

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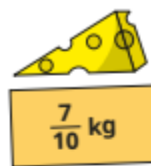
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What is the mass of the leftover potatoes?

Extension...

5

Eva is doing the long jump.

On her first attempt, she jumps $3\frac{2}{9}$ m.

Her second attempt is $\frac{2}{3}$ m shorter than her first.

How far does Eva jump on her second attempt?





Mo watches television for $3\frac{2}{5}$ hours during a weekend.



Alex watches $\frac{13}{15}$ fewer hours than Mo.

Alex watches 1 hour of television on Saturday.
For how long does Alex watch television on Sunday?

Have a think



Mo



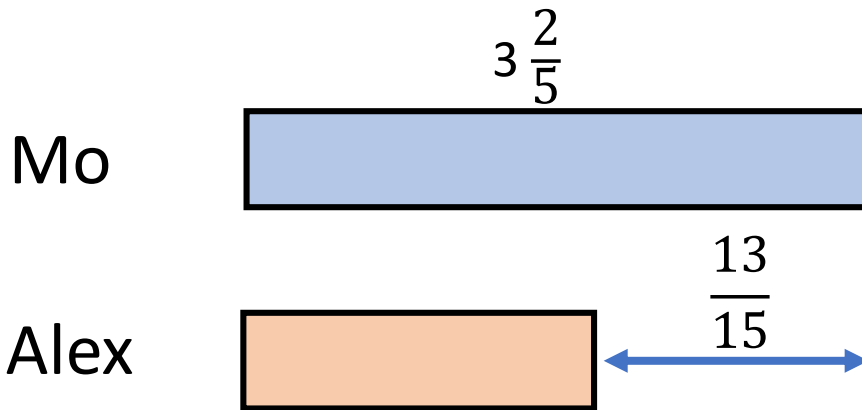
$3\frac{2}{5}$

Alex



$\frac{13}{15}$





Alex watches $2\frac{8}{15}$ hours of television on Saturday.

For how long does Alex watch television on Sunday?

$$2\frac{8}{15} - 1 = 1\frac{8}{15} \text{ hours}$$

$$3\frac{6}{15} - \frac{6}{15} = 3$$

$$3 - \frac{7}{15} = 2\frac{8}{15}$$

Maths Meeting-Mon

Key skills test



16.1.24 LO: To subtract two mixed numbers



Add fractions within 1

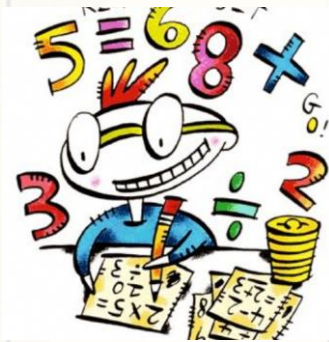
To add fractions, you must first make sure that the numerators of each fraction are the same.

Whiteboards! Explain!

False

To add fractions, you must first make sure that the **denominators** of each fraction are the same.

Maths Three Repeating Golden Threads



Mastery

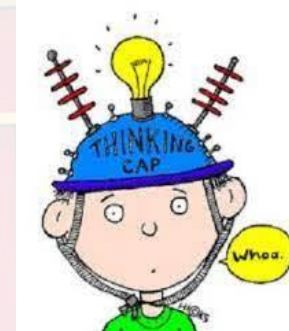
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Term Autumn 2

Week beginning 4.12.23

Block Fractions A

Key vocabulary numerator convert
improper denominator equivalent mixed
number order compare

	WT	EX	S
To compare and order fractions greater than 1			
To add and subtract fractions with same denominator			
To add fractions within 1			
To add fractions with total greater than 1			
Add to a mixed number			
Add two mixed numbers			
Subtract fractions			
Subtract from a mixed number			
Subtract two mixed numbers			

Stem sentences

- If the number of wholes is different, then the number with wholes is greater.
- If the number of wholes is equal, then I need to compare the
- When adding/subtracting fractions with the same denominators, I just add/subtract the
- Fractions must have the same before you can add them.
- The denominator has been multiplied by , so the numerator needs to be multiplied by for the fractions to be equivalent

Crucial Vocab...

subtract
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equivalent
mixed number

subtract
equivalent
mixed number

subtract
equivalent
mixed number

subtract
equivalent
mixed number

$$1) 4 - 1 =$$

$$2) \frac{7}{12} - \frac{1}{6} =$$

$$3) 4\frac{7}{12} - 1\frac{1}{6} =$$

$$4) \frac{55}{12} - \frac{14}{12} =$$

Recap...

$$1) \quad 4 - 1 = 3$$

$$2) \quad \frac{7}{12} - \frac{1}{6} = \frac{7}{12} - \frac{2}{12} = \frac{5}{12}$$

$$3) \quad 4\frac{7}{12} - 1\frac{1}{6} = 3\frac{5}{12}$$

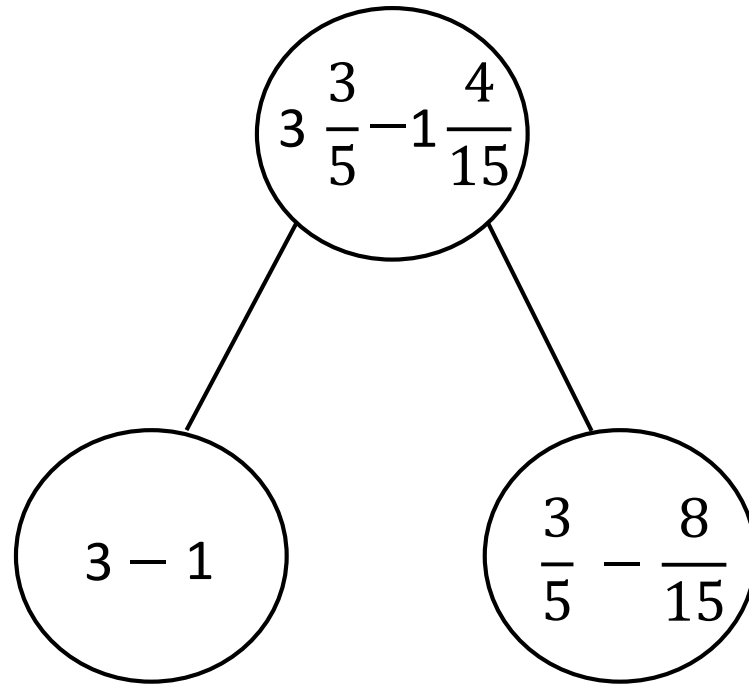
$$4) \quad \frac{55}{12} - \frac{14}{12} = \frac{41}{12} = 3\frac{5}{12}$$

$$\cancel{3} \frac{3}{5} - \cancel{1} \frac{8}{15} = 2 \frac{1}{15}$$

$$3 - 1 = 2$$

$$\frac{3}{5} - \frac{8}{15} =$$

$$\frac{9}{15} - \frac{8}{15} = \frac{1}{15}$$

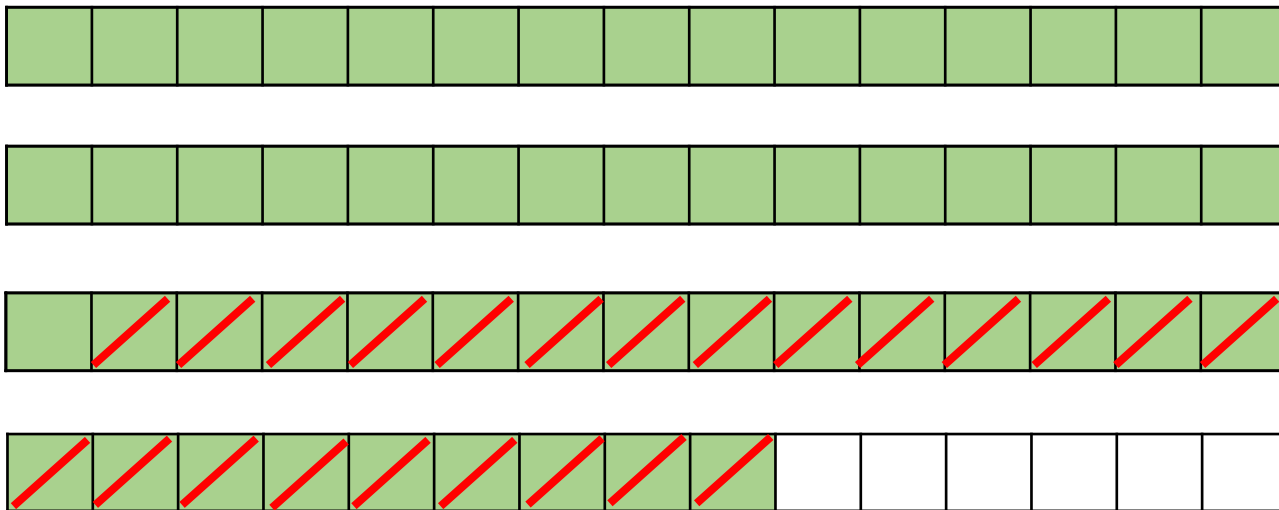


The mixed numbers can be partitioned into a whole part and a fractional part.

$$3\frac{3}{5} - 1\frac{8}{15} =$$

$$3\frac{9}{15} - 1\frac{8}{15}$$

$$\frac{54}{15} - \frac{23}{15} = \frac{31}{15} = 2\frac{1}{15}$$



$$1) \ 5\frac{9}{14} - 3\frac{2}{7} =$$

$$5\frac{9}{14} - 3\frac{4}{14} = 2\frac{5}{14}$$

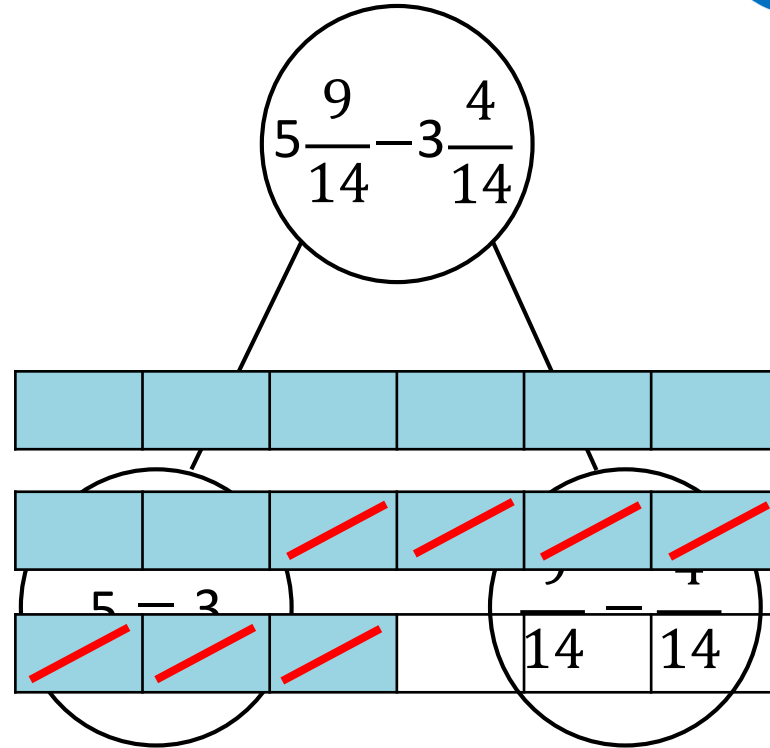
Have a think



$$2) \ 2\frac{1}{2} - 1\frac{1}{6} =$$

$$2\frac{3}{6} - 1\frac{1}{6} =$$

$$\frac{15}{6} - \frac{7}{6} = \frac{8}{6} = 1\frac{2}{6}$$





Your turn



Subtract two mixed numbers

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



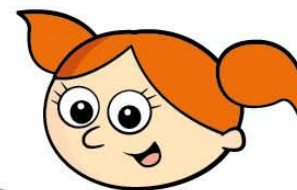
Amir

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



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

Whose method do you prefer?

Explain your answer.



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



Amir

First subtract 2 from 3,
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Convert to an improper
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$$\frac{14}{4} - \frac{9}{4} = \frac{5}{4} = 1\frac{1}{4}$$



Alex

Whose method do you prefer? _____

Explain your answer.

- 2 Use your preferred method to complete the subtractions.

a) $4\frac{4}{5} - 2\frac{3}{10} = \boxed{}$

c) $16\frac{1}{2} - 5\frac{1}{4} = \boxed{}$

b) $3\frac{5}{8} - 1\frac{1}{4} = \boxed{}$

d) $10\frac{5}{6} - 5\frac{5}{12} = \boxed{}$

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



Amir

First subtract 2 from 3,
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Alex

Whose method do you prefer? _____

Explain your answer.

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b) $3\frac{5}{8} - 1\frac{1}{4} = \boxed{}$

d) $10\frac{5}{6} - 5\frac{5}{12} = \boxed{}$

2

Use your preferred method to complete the subtractions.

a) $4\frac{4}{5} - 2\frac{3}{10} =$

c) $16\frac{1}{2} - 5\frac{1}{4} =$

b) $3\frac{5}{8} - 1\frac{1}{4} =$

d) $10\frac{5}{6} - 5\frac{5}{12} =$

What do you notice about your answer to part d)?





3

Car A travels $15\frac{1}{4}$ miles.

Car B travels $21\frac{5}{12}$ miles.



How much further does Car B travel than Car A?

miles

4 Amir and Dora are working out $4\frac{1}{5} - 1\frac{2}{5}$

Tues

a)



Amir

I am not sure what to do because you cannot do

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

Do you agree with Amir?

b)

I know that $4\frac{1}{5} = 3\frac{6}{5}$



Dora

How does this help you to work out the subtraction?

4 Amir and Dora are working out $4\frac{1}{5} - 1\frac{2}{5}$

a)



Amir

I am not sure what to do because you cannot do

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

Do you agree with Amir?

b)

I know that $4\frac{1}{5} = 3\frac{6}{5}$



Dora

How does this help you to work out the subtraction?

4 Amir and Dora are working out $4\frac{1}{5} - 1\frac{2}{5}$

a)



Amir

I am not sure what to do because you cannot do

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

Do you agree with Amir?

b)

I know that $4\frac{1}{5} = 3\frac{6}{5}$



Dora

How does this help you to work out the subtraction?

4 Amir and Dora are working out $4\frac{1}{5} - 1\frac{2}{5}$

a)



Amir

I am not sure what to do because you cannot do

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

Do you agree with Amir?

b)

I know that $4\frac{1}{5} = 3\frac{6}{5}$



Dora

How does this help you to work out the subtraction?



4

Amir and Dora are working out $4\frac{1}{5} - 1\frac{2}{5}$

a)

Amir



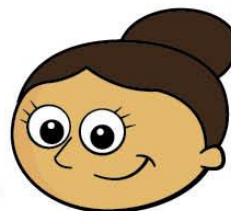
I am not sure what to do because you cannot do

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

Do you agree with Amir?

b)

I know that $4\frac{1}{5} = 3\frac{6}{5}$



Dora

How does this help you to work out the subtraction?

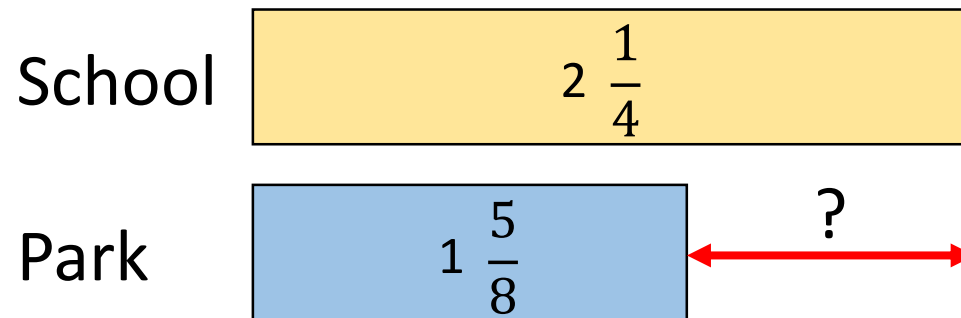
c) Complete the subtraction.

$$4\frac{1}{5} - 1\frac{2}{5} =$$

From Jack's house to school is $2\frac{1}{4}$ km.

From Jack's house to the park is $1\frac{5}{8}$ km.

How much closer is the park to Jack's house?

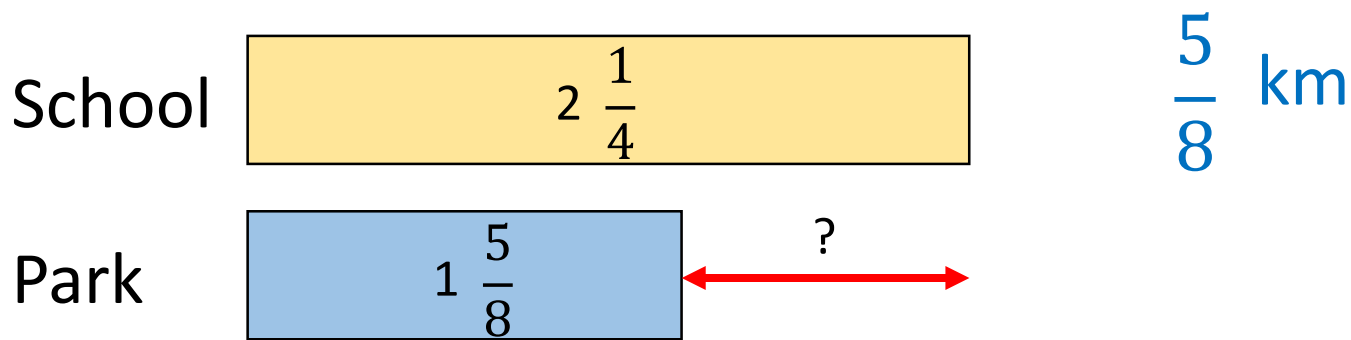


$$2\frac{1}{4} - 1\frac{5}{8} =$$

Have a think



How much closer is the park to Jack's house?



$$2\frac{1}{4} - 1\frac{5}{8} =$$

$$2\frac{2}{8} - 1\frac{5}{8} =$$

$$\frac{18}{8} - \frac{13}{8} = \frac{5}{8}$$



5 Complete the subtractions.

a) $4\frac{4}{5} - 2\frac{9}{10} =$

c) $5\frac{2}{7} - 2\frac{11}{14} =$

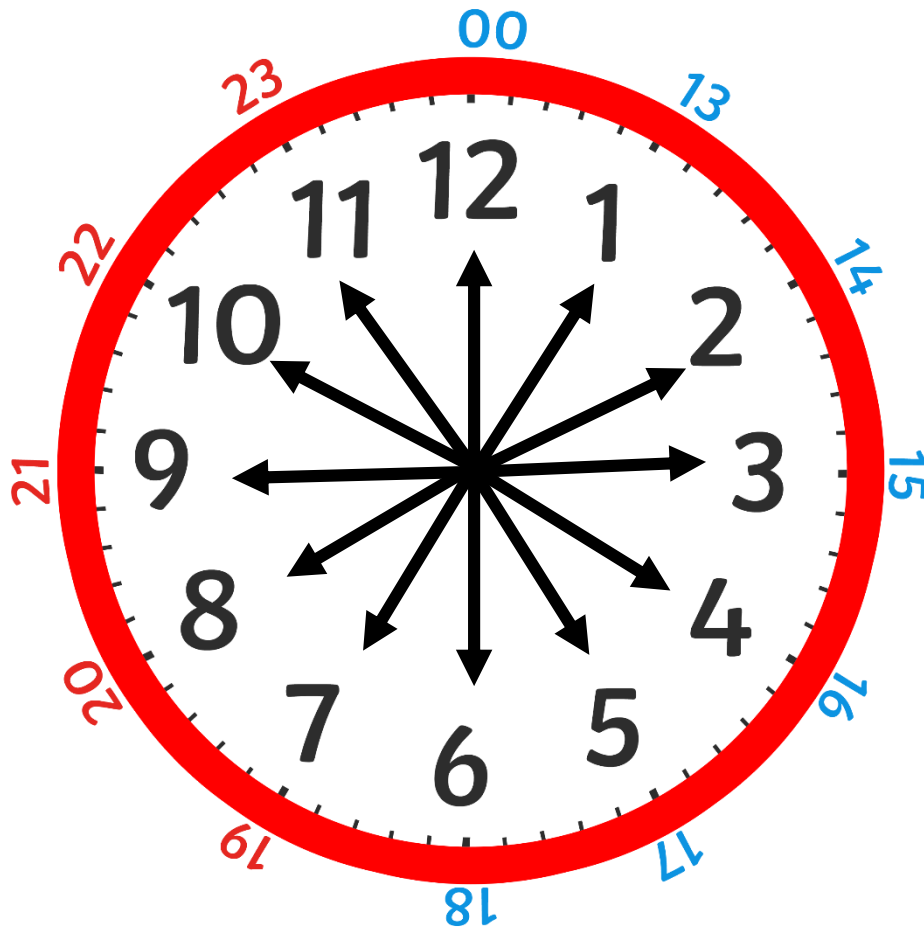
b) $3\frac{5}{8} - 1\frac{3}{4} =$

d) $2\frac{1}{6} - 1\frac{7}{18} =$

Maths Meeting- Tue

Time revision- time differences





On a 24 hour clock, once we get past 1pm we add 12 hours on to the time shown on the clock face.

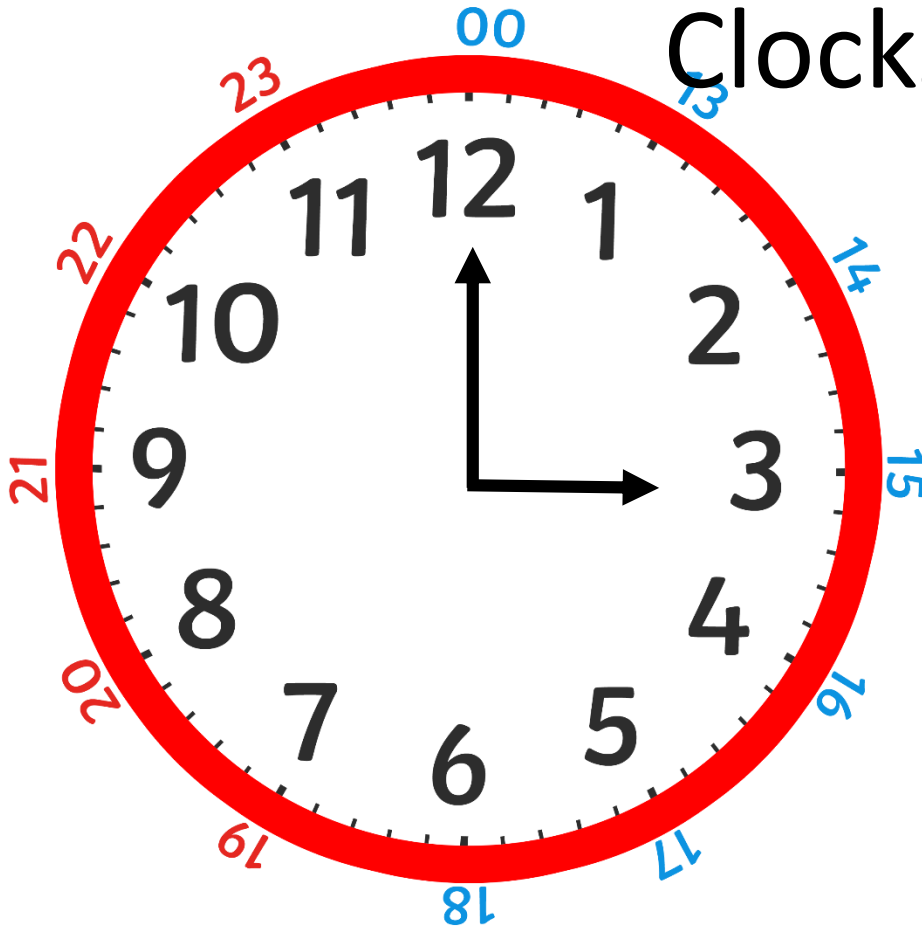
24 Hour Digital Clocks



24 hour digital clocks also have an hour and minute display, separated by a colon.

The hours will always be before the colon. The hours go from 0 to 23. The minutes will always be after the colon.

Converting From 12 to 24 Hour Clocks

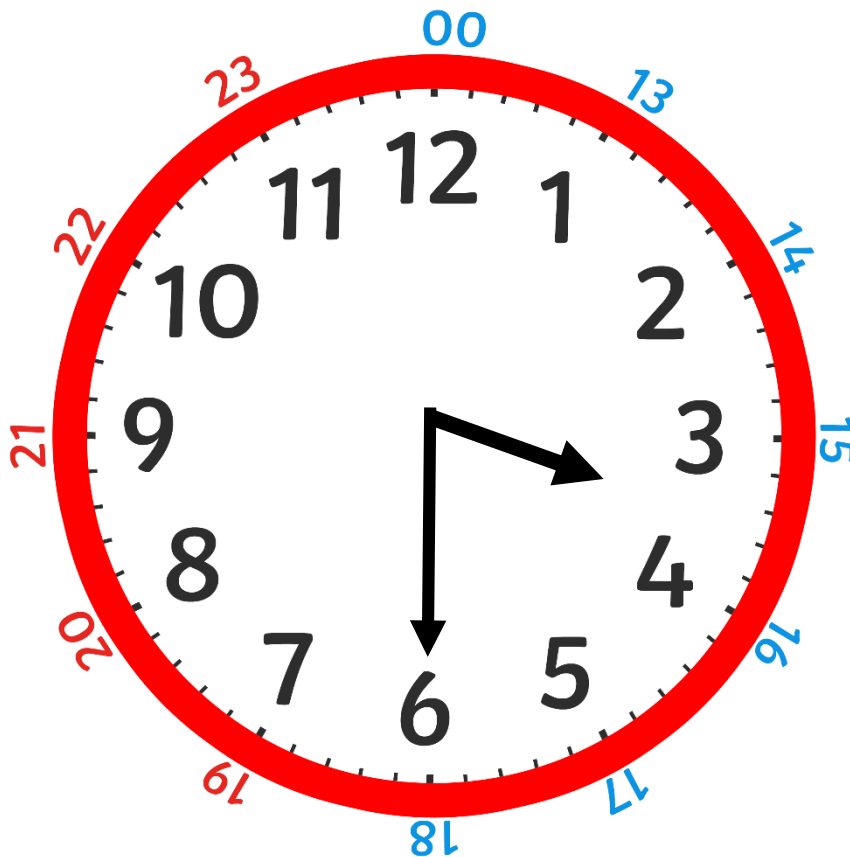


Do the clocks show the same time?

What is the same about the clocks?

What is different?

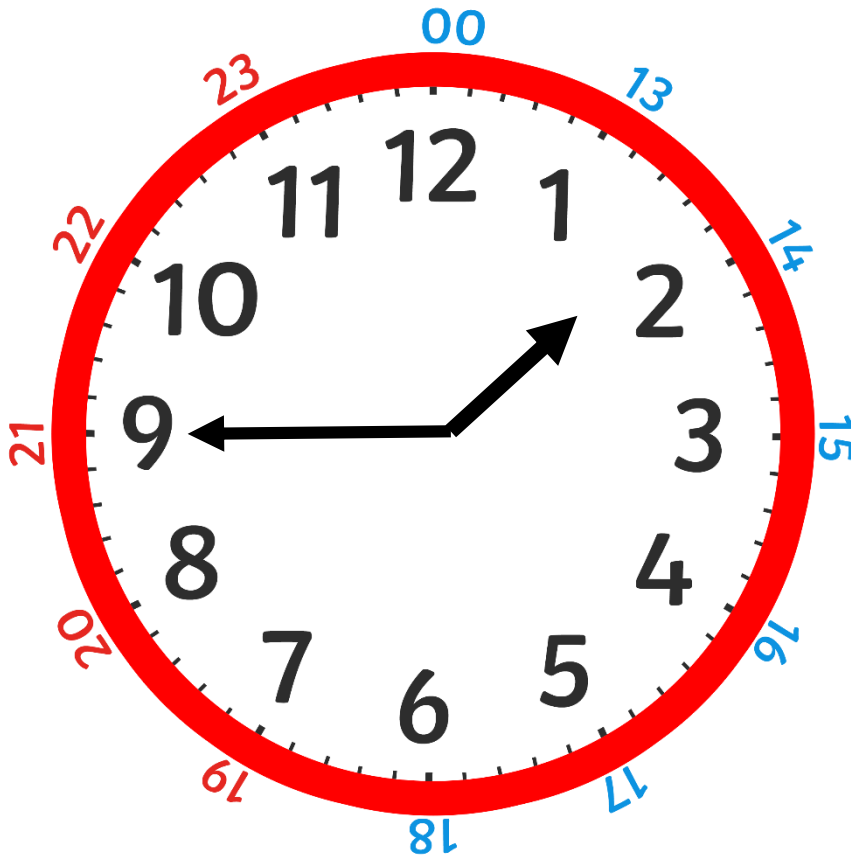
Converting From 12 to 24 Hour Clocks



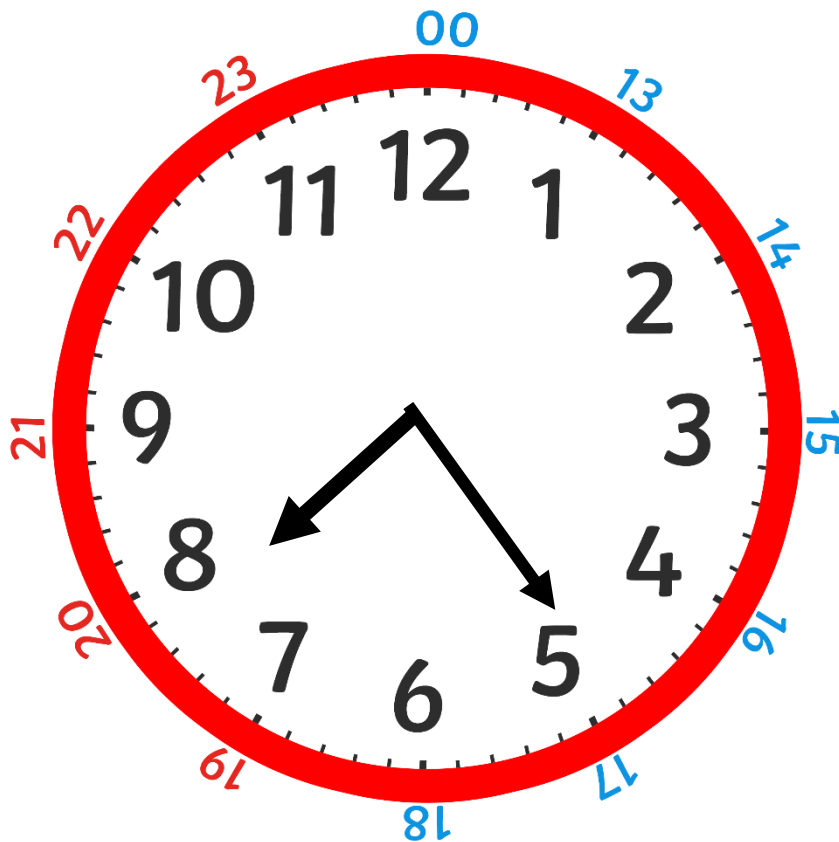
What is the digital time represented by the analogue clock?

On a 24 hour clock this could be two different times, what would they be?

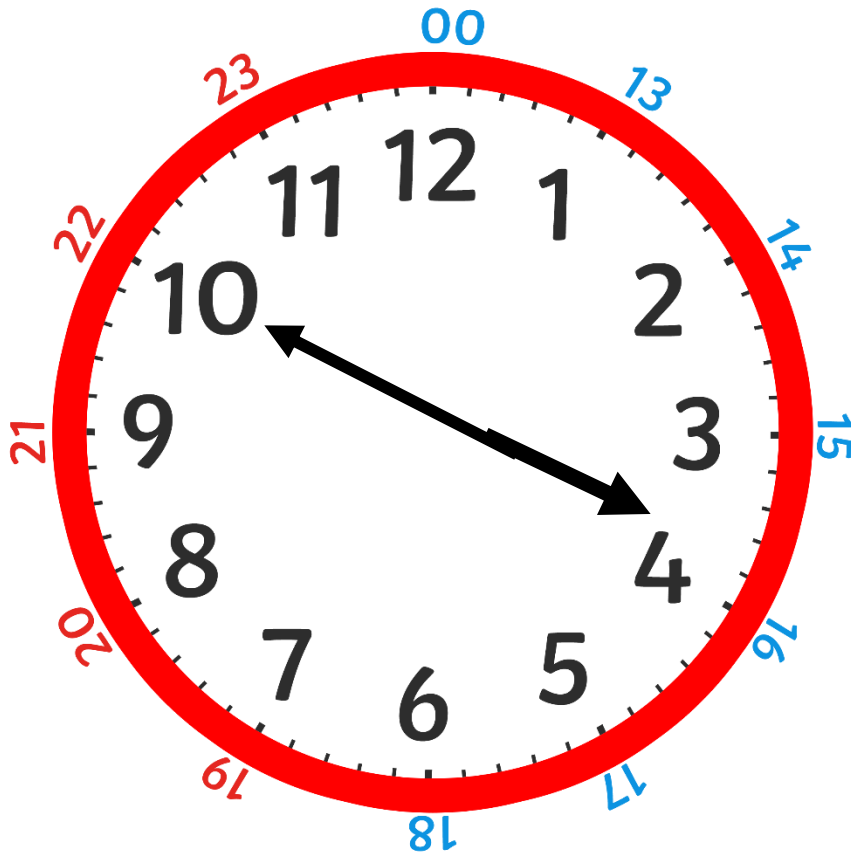
Try This One



What About This One?



Feeling Confident?



Day 1: Calculate time intervals using the 24-hour clock.



This is a 24-hour digital clock. What would this time look like on a 12-hour digital clock?



When is it useful to use a 24-hour digital clock rather than a 12-hour digital clock?

A school science **lesson starts at 10:45** and **ends at 11:35**.
How long does it last?
Sketch a time number line to represent this on your whiteboard.



How many minutes until 11 o'clock? Remember that we are counting up to 60, not 100...

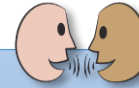


$$15 \text{ mins} + 35 \text{ mins} = 50 \text{ mins}$$

Day 1: Calculate time intervals using the 24-hour clock.

A P.E. lesson **starts at 13:30** and **ends at 14:45**.

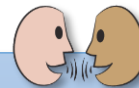
How long does it last?
Sketch a time number line to represent this on your whiteboard.



Compare your timeline with your partner's.

A singing lesson **starts at 11:50** and **ends at 12:35**.

How long does it last?
Sketch a time number line to represent this on your whiteboard.



Compare your timeline with your partner's.

17.1.24 End of block assessment

Flashback 4 warm up! Stick in books and complete

Flashback 4

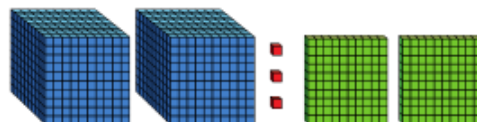
Year 5 | Week 9 | Day 1

1) $200 \times 30 =$

2) $45 \times 100 =$

3) What are the first five multiples of 25?

4) What number is shown?



X

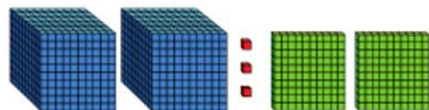
X

1) $200 \times 30 =$

2) $45 \times 100 =$

3) What are the first five multiples of 25?

4) What number is shown?



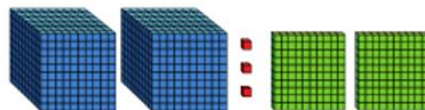
X

1) $200 \times 30 =$

2) $45 \times 100 =$

3) What are the first five multiples of 25?

4) What number is shown?



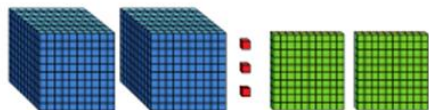
X

1) $200 \times 30 =$

2) $45 \times 100 =$

3) What are the first five multiples of 25?

4) What number is shown?



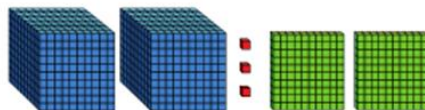
X

1) $200 \times 30 =$

2) $45 \times 100 =$

3) What are the first five multiples of 25?

4) What number is shown?



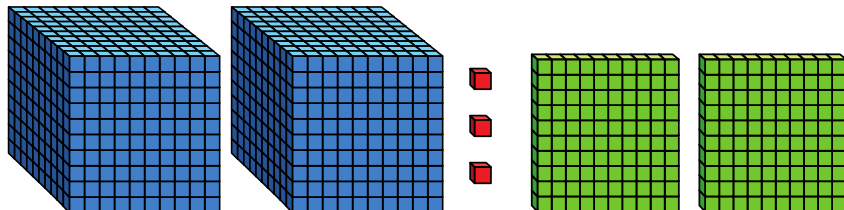
X

1) $200 \times 30 =$

2) $45 \times 100 =$

3) What are the first five multiples of 25?

4) What number is shown?



X

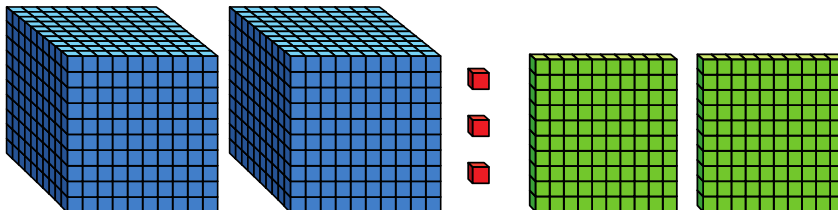
1) $200 \times 30 =$ 6,000

2) $45 \times 100 =$ 4,500

3) What are the first five multiples of 25?

25, 50, 75, 100, 125

4) What number is shown?



2,203

Fractions A

A

Name _____

- 1 Use the diagram to help you complete the equivalent fraction.



$$\frac{1}{2} = \frac{\square}{6}$$



1 mark

- 2 Use the diagram to calculate $\frac{4}{5} + \frac{3}{5}$



1 mark

- 3 Complete the equivalent fractions.

$$\frac{10}{35} = \frac{\square}{7}$$

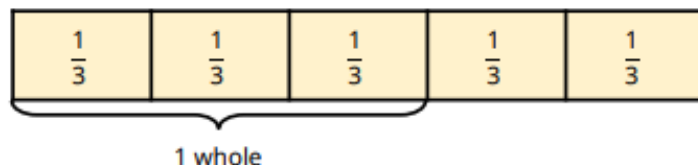
$$\frac{\square}{27} = \frac{2}{3}$$

$$\frac{3}{5} = \frac{9}{\square} = \frac{\square}{35}$$

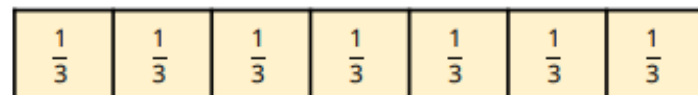


4 marks

- 4 Jack uses a bar model to show that $\frac{5}{3} = 1\frac{2}{3}$



Use this bar model to convert $\frac{7}{3}$ to a mixed number.



1 mark

- 5 Convert $2\frac{3}{5}$ to an improper fraction. Use the diagram to help you.



1 mark

- 6 Complete.

$$13\frac{7}{10} = \frac{\square}{10}$$

$$\square\frac{2}{3} = \frac{20}{3}$$



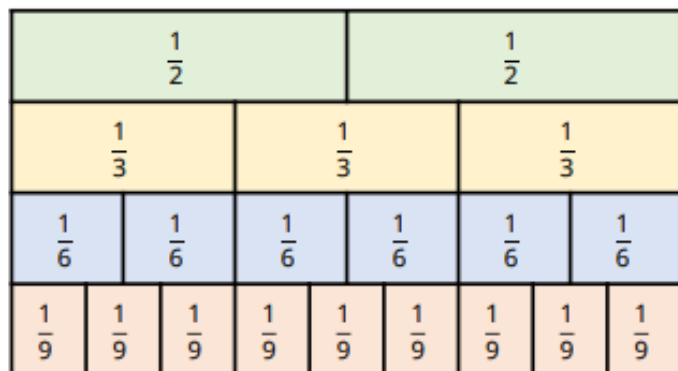
2 marks

- 7 Use the bar model to calculate $\frac{1}{2} + \frac{3}{8}$



2 marks

- 8 Annie makes a fraction wall using coloured blocks.



Complete using $<$, $>$ or $=$

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

$$\frac{5}{6} \bigcirc \frac{7}{9}$$

$$\frac{4}{9} \bigcirc 1$$



3 marks

- 9 Hassan and Amy have the same amount of juice in a carton.

Hasson drinks $\frac{3}{4}$ of his juice.

Amy drinks $\frac{5}{6}$ of her juice.

Who has the most juice left? Explain your choice.



2 marks

- 10 Complete the missing numbers.

$$11 \div 3 = \begin{array}{|c|} \hline \square \\ \hline \square \\ \hline \end{array}$$



1 mark

- 11 Calculate.

$$2\frac{1}{3} - \frac{5}{6}$$



$$1\frac{3}{5} - \frac{7}{10}$$

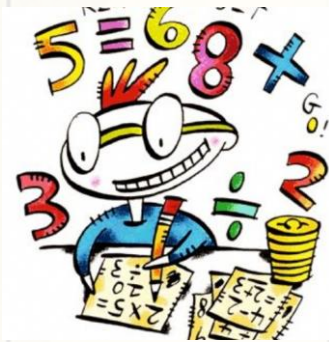


1 mark



1 mark

Maths Three Repeating Golden Threads



Mastery

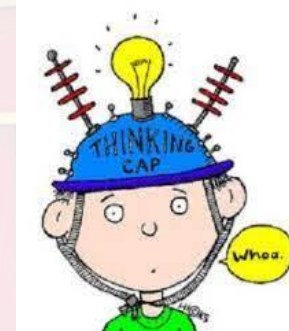
Pupils acquire a deep, long-term, secure adaptable understanding

Fluency

Quick and. efficient recall of facts and procedures

Application

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



Maths Meeting-Weds

Times tables practise



1) $9 \times 3 =$

2) $40 \times 3 =$

3) $4 \times 4 =$

4) $36 \div 6 =$

5) $36 \div 3 =$

6) $8 \times 9 =$

7) $4 \times$ $= 20$

8) $132 \div$ $= 11$

9) $50 \times 30 =$

10) $12^2 =$

11) $72 \div$ $= 12$

12) $99 \div 9 =$

Quick practice ...

1) $9 \times 3 =$

2) $40 \times 3 =$

3) $4 \times 4 =$

4) $36 \div 6 =$

5) $36 \div 3 =$

6) $8 \times 9 =$

7) $4 \times$ $= 20$

8) $132 \div$ $= 11$

9) $50 \times 30 =$

10) $12^2 =$

11) $72 \div$ $= 12$

12) $99 \div 9 =$

1) $9 \times 3 =$

2) $40 \times 3 =$

3) $4 \times 4 =$

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10) $12^2 =$

11) $72 \div$ $= 12$

12) $99 \div 9 =$

1) $9 \times 3 =$

2) $40 \times 3 =$

3) $4 \times 4 =$

4) $36 \div 6 =$

5) $36 \div 3 =$

6) $8 \times 9 =$

7) $4 \times$ $= 20$

8) $132 \div$ $= 11$

9) $50 \times 30 =$

10) $12^2 =$

11) $72 \div$ $= 12$

12) $99 \div 9 =$

1) $9 \times 3 =$

2) $40 \times 3 =$

3) $4 \times 4 =$

4) $36 \div 6 =$

5) $36 \div 3 =$

6) $8 \times 9 =$

7) $4 \times$ $= 20$

8) $132 \div$ $= 11$

9) $50 \times 30 =$

10) $12^2 =$

11) $72 \div$ $= 12$

12) $99 \div 9 =$

Partner work-answers on whiteboards

1. Nine multiplied by seven	
2. Forty-eight divided by six	
3. nine lots of seven	
4. 720 shared by 6	
5. £540 divided by 9 people	
6. 960m cut into 12 equal strips is?	
7. 12 squared is?	
8. 84 sweets shared equally between 7 children	
9. 8 litres poured equally into 4 buckets is?	
10. seven multiplied by 80	
11. nine times eight	
12. twelve books bought for £8 each <u>totals</u> ?	
13. 11 crisp packets at 60p each cost?	

Thurs 18.1.24

LO: To multiply up to a 4-digit number by a 1-digit number

Answers in
maths books

$$1) 20 + 20 + 20 + 20 =$$

$$2) 4 \times 20 =$$

$$3) 4 \times 200 =$$

$$4) 4 \times 400 =$$

$$1) 20 + 20 + 20 + 20 =$$

$$2) 4 \times 20 =$$

$$3) 4 \times 200 =$$

$$4) 4 \times 400 =$$

$$1) 20 + 20 + 20 + 20 = 80$$

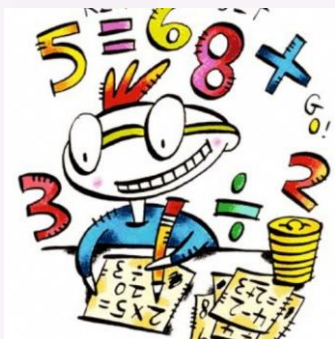
$$2) 4 \times 20 = 80$$

$$3) 4 \times 200 = 800$$

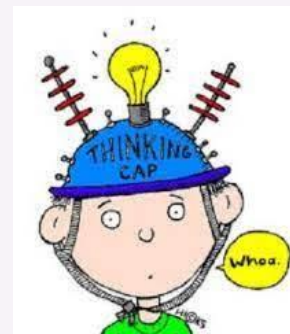
$$4) 4 \times 400 = 1,600$$

$$4 \times 200 \times 2$$

Maths Three Repeating Golden Threads



Quick and. efficient recall
of facts and procedures



Mastery

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

Fluency

Application

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



Rose
MATHS



Term Spring 1 Week beginning 23.1.23

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 up to a 4-digit number by a 1-digit number			
Multiply a 2-digit number by a 2-digit number			
Multiply a 3-digit number by a 2-digit number			
Multiply a 4-digit number by a 2-digit number			
Solve problems with multiplication			
Short division			
Divide a 4-digit number by a 1-digit number			
Divide with remainders			
Efficient division			
Solve problems with multiplication and division			

Stem sentences

- First, I multiply ___ by ___ ones. Then I multiply ___ by ___ tens. Finally, I add together ___ and ___.
- To calculate $\text{___} \times 24$, I can do $\text{___} \times \text{___} \times \text{___}$
- To calculate $9,999 \times \text{___}$, I can do $10,000 \times \text{___} - \text{___}$
- The most efficient strategy to calculate $\text{___} \times \text{___}$ is ...
- ___ hundreds divided by ___ is equal to ___ hundreds with a remainder of ___
- Exchange the remainder, then ___ tens divided by ___ is equal to ___ tens with a remainder of ___
- Exchange the remainder, then ___ ones divided by ___ is equal to ___ ones

Crucial Vocab...

multiply
exchange
column

Thurs

multiply
exchange
column

multiply
exchange
column

multiply
exchange
column

multiply
exchange
column

multiply
exchange
column

multiply
exchange
column

multiply
exchange
column

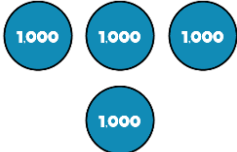
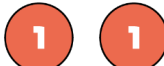
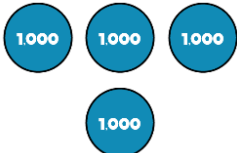
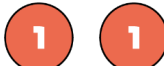
multiply
exchange
column

multiply
exchange
column

multiply
exchange
column

Thurs

Complete the sentences to describe the multiplication.

Thousands	Hundreds	Tens	Ones
			
			

There are 4 ones thousands.
 There are 2 hundreds.
 There are 3 tens.
 There are 2 ones.
 There are 8 thousands altogether.

How does multiplication
link to addition?

$$4,232 \times 2 = \underline{8,464}$$

Have a think





Calculate $3,223 \times 3$ Model...

Thousands	Hundreds	Tens	Ones
  	 	 	  
  	 	 	  
  	 	 	  

	3	2	2	3	
×				3	
	9	6	6	9	

Do you need to make an
exchange?

Have a think





There are 2,114 seats in a theatre. The theatre is fully booked for 3 shows. How many people attend overall?

$$2,114 \times 3$$

Thousands	Hundreds	Tens	Ones
 			 
 			 
 			 

	2	1	1	4	
×				3	
	6	3	4	2	
			1		

Do you need to make an exchange?

6,342 people attend.



 There are 2,114 seats in a theatre. The theatre is fully booked for 3 shows. How many people attend overall?

$$2,114 \times 3$$

Thousands	Hundreds	Tens	Ones

	2	1	1	4	
×				3	

 There are 2,114 seats in a theatre. The theatre is fully booked for 3 shows. How many people attend overall?

$$2,114 \times 3$$

Thousands	Hundreds	Tens	Ones

	2	1	1	4	
×				3	

 There are 2,114 seats in a theatre. The theatre is fully booked for 3 shows. How many people attend overall?

$$2,114 \times 3$$

Thousands	Hundreds	Tens	Ones

	2	1	1	4	
×				3	

 There are 2,114 seats in a theatre. The theatre is fully booked for 3 shows. How many people attend overall?

$$2,114 \times 3$$

Thousands	Hundreds	Tens	Ones

	2	1	1	4	
×				3	

Thurs

S group- use
cubes ,
counters and
place value
chart. Photo
for book

1

Complete the sentences to describe the multiplication.

Th	H	T	O
 	 		  
 	 		  
 	 		  

There are ones altogether.

There are tens altogether.

There are hundreds altogether.

There are thousands altogether.

$$2,213 \times 3 = \boxed{}$$

2

Complete the multiplication.

Use the place value chart to help you.

Th	H	T	O

		2	1	0	2	
	x				4	

- 1 Complete the sentences to describe the multiplication.

Th	H	T	O
1,000 1,000	100 100	10	1 1 1
1,000 1,000	100 100	10	1 1 1
1,000 1,000	100 100	10	1 1 1

There are ones altogether.

There are tens altogether.

There are hundreds altogether.

There are thousands altogether.

$$2,213 \times 3 = \boxed{}$$

- 2 Complete the multiplication.

Use the place value chart to help you.

Th	H	T	O

		2	1	0	2
	x				4

- 1 Complete the sentences to describe the multiplication.

Th	H	T	O
1,000 1,000	100 100	10	1 1 1
1,000 1,000	100 100	10	1 1 1
1,000 1,000	100 100	10	1 1 1

There are ones altogether.

There are tens altogether.

There are hundreds altogether.

There are thousands altogether.

$$2,213 \times 3 = \boxed{}$$

- 2 Complete the multiplication.

Use the place value chart to help you.

Th	H	T	O

		2	1	0	2
	x				4

Guided in books



3

A football stadium holds 2,214 people.

The stadium is full for four matches in a row.

What was the attendance for all four matches?

Th	H	T	O
1,000 1,000	100 100	10	1 1 1 1
1,000 1,000	100 100	10	1 1 1 1
1,000 1,000	100 100	10	1 1 1 1
1,000 1,000	100 100	10	1 1 1 1

		2	2	1	4	
	×				4	

The attendance for all four matches was

$$2,420 \times 4 =$$



Thousands	Hundreds	Tens	Ones
	100 100	10 10 10 10	1 1
	100 100	10 10 10 10	1 1
	100 100	10 10 10 10	1 1
	100 100	10 10 10 10	1 1

	2	4	2	0	
×				4	
		9	6	8	
		1			

Have a think



Do you agree with Tiny?

Discuss

- 3 A football stadium holds 2,214 people.

The stadium is full for four matches in a row.

What was the attendance for all four matches?

Th	H	T	O
1,000 1,000	100 100	10	1 1
1,000 1,000	100 100	10	1 1
1,000 1,000	100 100	10	1 1
1,000 1,000	100 100	10	1 1

		2	2	1	4	
	x				4	

The attendance for all four matches was

- 4 Nijah is calculating $2,430 \times 3$

She makes this place value chart to help her.

Th	H	T	O
	100 100	10 10 10 10	1 1 1
	100 100	10 10 10 10	1 1 1
	100 100	10 10 10 10	1 1 1

She gets the answer 729

What mistake has Nijah made?

What is the correct answer?

- 3 A football stadium holds 2,214 people.

The stadium is full for four matches in a row.

What was the attendance for all four matches?

Th	H	T	O
1,000 1,000	100 100	10	1 1
1,000 1,000	100 100	10	1 1
1,000 1,000	100 100	10	1 1
1,000 1,000	100 100	10	1 1

		2	2	1	4	
	x				4	

The attendance for all four matches was

- 4 Nijah is calculating $2,430 \times 3$

She makes this place value chart to help her.

Th	H	T	O
	100 100	10 10 10 10	1 1 1
	100 100	10 10 10 10	1 1 1
	100 100	10 10 10 10	1 1 1

She gets the answer 729

What mistake has Nijah made?

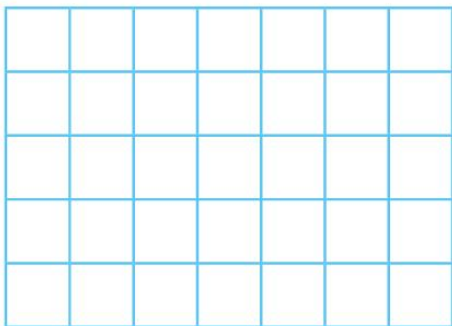
What is the correct answer?



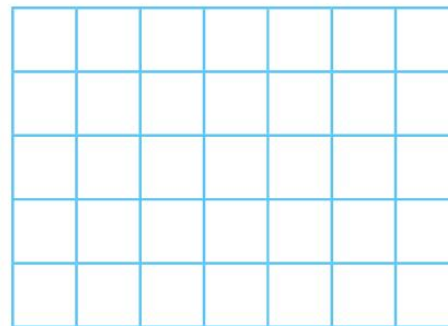
Copy into books

5 Complete the multiplications.

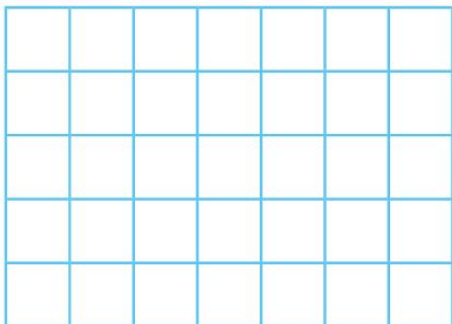
a) $3,126 \times 3 =$



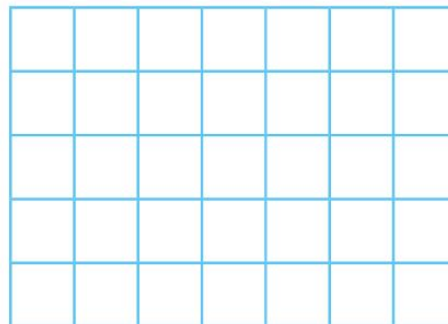
c) $4,132 \times 6 =$



b) $4,812 \times 2 =$



d) $1,502 \times 5 =$



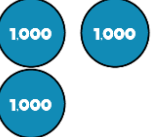
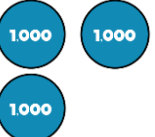
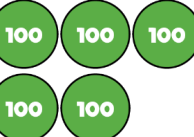
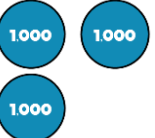
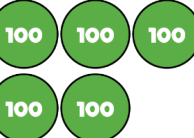
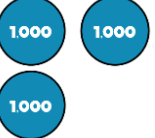
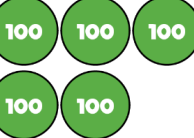
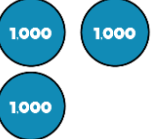
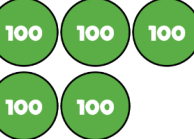


Thousands	Hundreds	Tens	Ones
1000 1000	100 100 100 100	10 10	
1000 1000	100 100 100 100	10 10	
1000 1000	100 100 100 100	10 10	
1000 1000	100 100 100 100	10 10	



	2	4	2	0	
×				4	
	9	6	8	0	
	1				

$$2,420 \times 4 = 9,680$$

TTh	Th	H	T	O
				
				
				
				
				

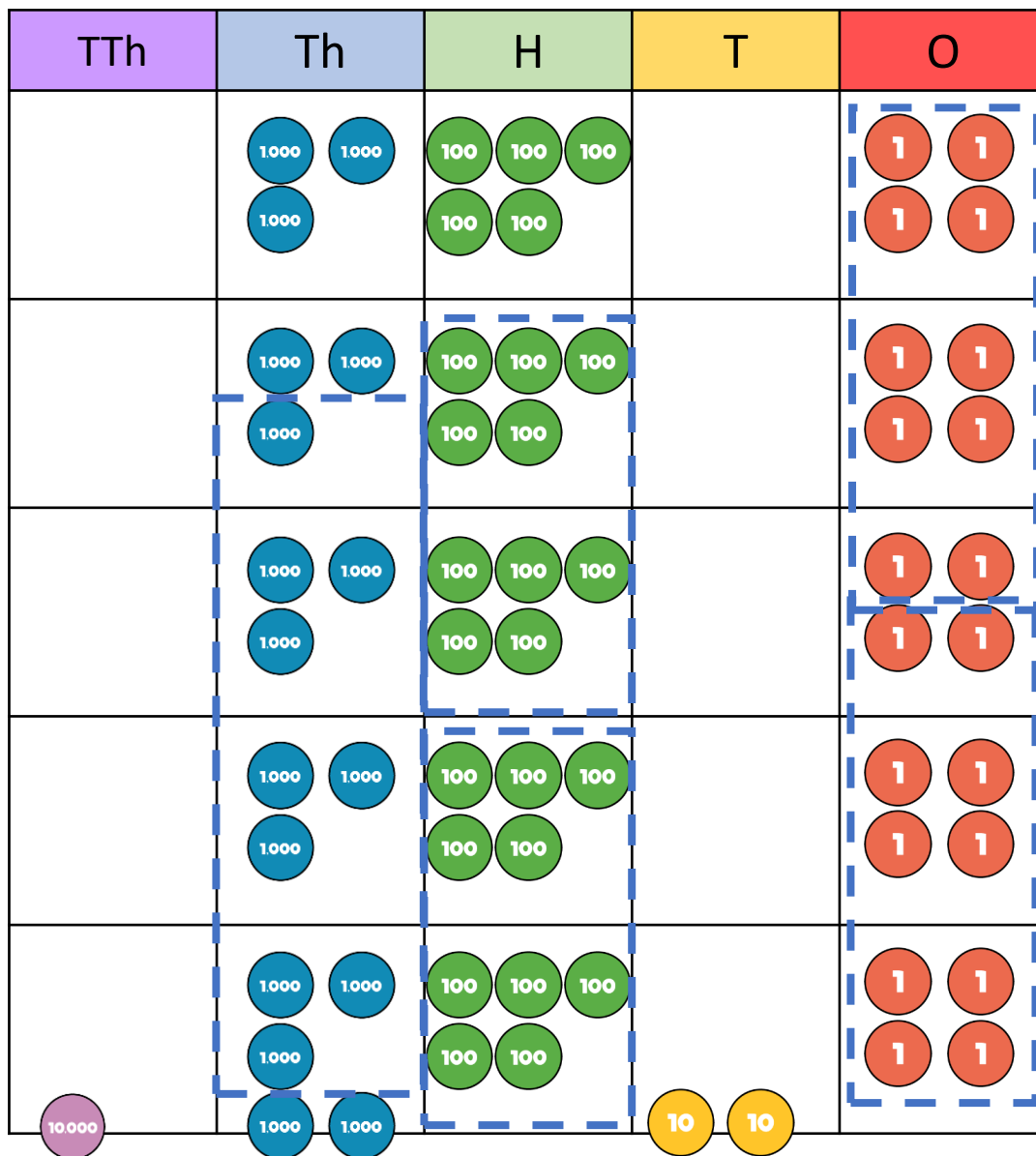
$$3,504 \times 5$$

$$3,000 \times 5$$

	3	5	0	4	
×				5	

Have a think



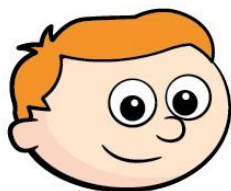


$$3,504 \times 5$$

$$= 17,520$$

	3	5	0	4	
×				5	
1	7	5	2	0	
1	2		2		

6 Ron is working out $7,423 \times 0$



The answer
is 7,423

$$\begin{array}{r} 7 \quad 4 \quad 2 \quad 3 \\ \times \qquad \qquad \qquad 0 \\ \hline 7 \quad 4 \quad 2 \quad 3 \\ \hline \end{array}$$

Do you agree with Ron? _____

Did Ron have to use a column method? Is there a quicker way?



- 6 Ron is working out $7,423 \times 0$



The answer is 7,423

$$\begin{array}{r} 7\ 4\ 2\ 3 \\ \times \quad 0 \\ \hline 7\ 4\ 2\ 3 \end{array}$$

Do you agree with Ron? _____

Did Ron have to use a column method? Is there a quicker way?

- 7 Work out the multiplications.

$2,846 \times 2 = \boxed{}$

$2,846 \times 8 = \boxed{}$

$2,846 \times 4 = \boxed{}$

What do you notice about the answers?

- 6 Ron is working out $7,423 \times 0$



The answer is 7,423

$$\begin{array}{r} 7\ 4\ 2\ 3 \\ \times \quad 0 \\ \hline 7\ 4\ 2\ 3 \end{array}$$

Do you agree with Ron? _____

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The answer is 7,423

$$\begin{array}{r} 7\ 4\ 2\ 3 \\ \times \quad 0 \\ \hline 7\ 4\ 2\ 3 \end{array}$$

Do you agree with Ron? _____

Did Ron have to use a column method? Is there a quicker way?

- 7 Work out the multiplications.

$2,846 \times 2 = \boxed{}$

$2,846 \times 8 = \boxed{}$

$2,846 \times 4 = \boxed{}$

What do you notice about the answers?

- 6 Ron is working out $7,423 \times 0$



The answer is 7,423

$$\begin{array}{r} 7\ 4\ 2\ 3 \\ \times \quad 0 \\ \hline 7\ 4\ 2\ 3 \end{array}$$

Do you agree with Ron? _____

Did Ron have to use a column method? Is there a quicker way?

- 7 Work out the multiplications.

$2,846 \times 2 = \boxed{}$

$2,846 \times 8 = \boxed{}$

$2,846 \times 4 = \boxed{}$

What do you notice about the answers?

7 Work out the multiplications.

$$2,846 \times 2 = \boxed{}$$

$$2,846 \times 8 = \boxed{}$$

$$2,846 \times 4 = \boxed{}$$

What do you notice about the answers?





8

$$248 \times 10 = 2,480$$

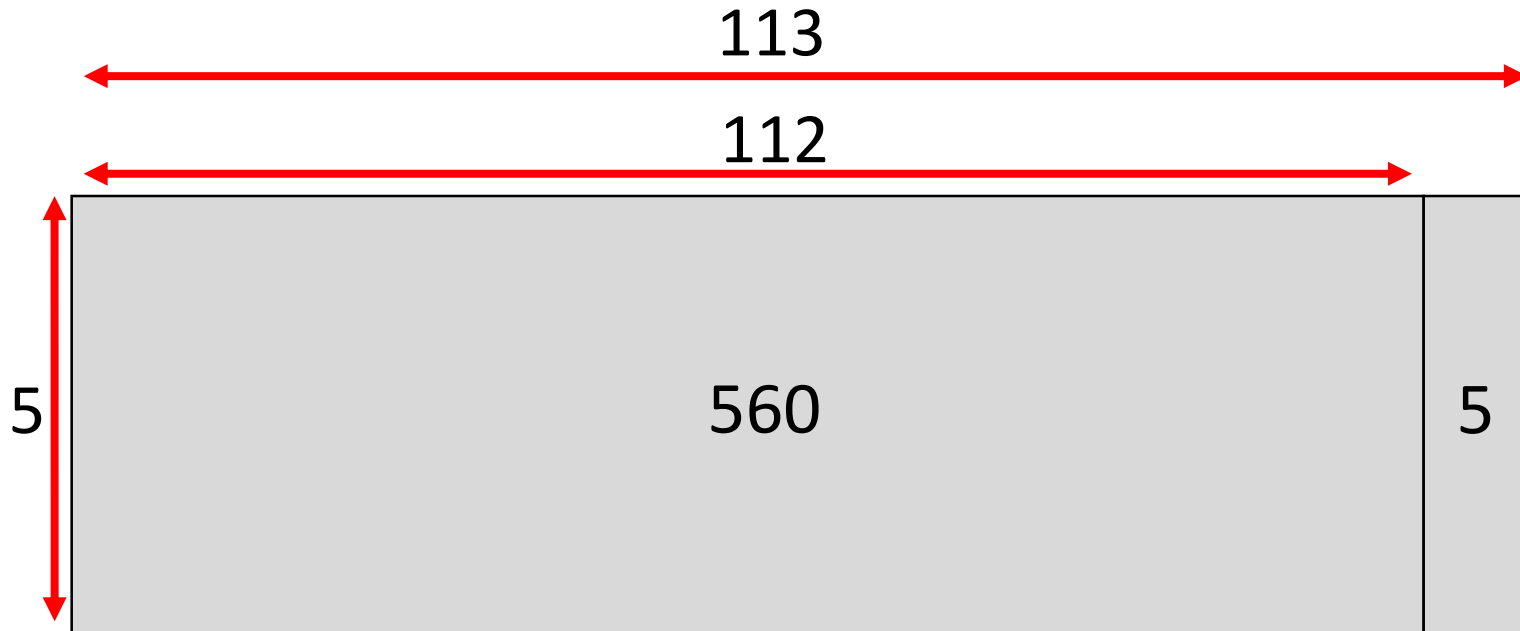
Without using the formal method, how could you use this fact to calculate 248×9 ?

Check your answer using the formal method.

Which method was easier?



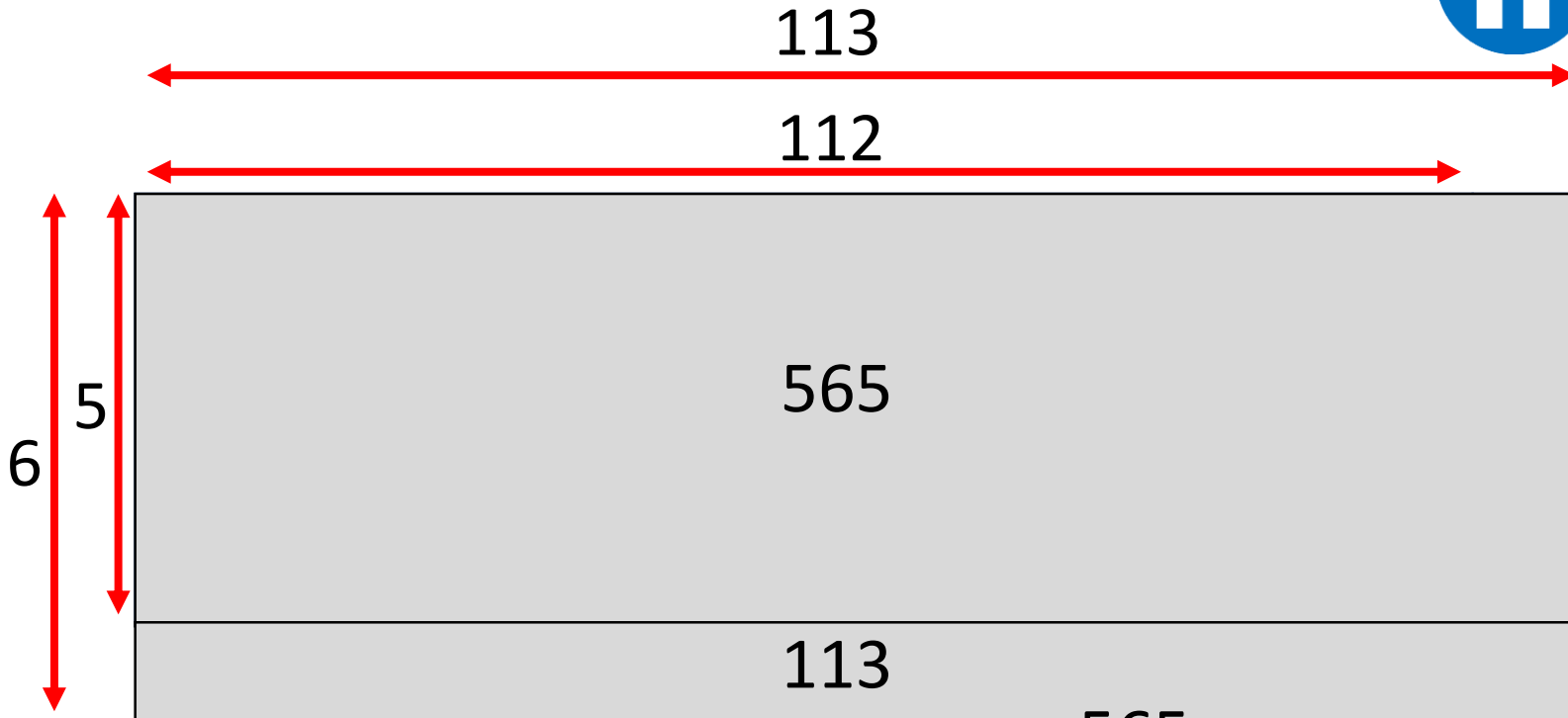
If I know $112 \times 5 = 560$
How can I work out 113×5 ?



$$113 \times 5 = 112 \times 5 + 5 = 565$$

If I know $112 \times 5 = 560$
How can I work out 113×6 ?

Have a think



$$113 \times 5 = 112 \times 5 + 5 = 565$$

$$113 \times 6 = 113 \times 5 + 113 = 678$$

Maths Meeting- Thurs

Time differences



What time does the 08:45 reach Ottery St Catchpole? Write both the 24-hour and 12-hour times on your whiteboard.

I am going to show a time in 12-hour format. Convert it to 24-hour format, search for it on the timetable and write the corresponding place name on your whiteboard.

Hogwarts Train Timetable

Route number	71	97	53	35	61	47	67
<i>Diagon Alley</i>	07:45	08:45	09:00	14:15	15:00	15:50	19:35
<i>Kings Cross</i>	08:02	09:02	09:17	14:45	15:17	16:07	19:52
<i>Little hinging</i>	09:15	10:15	-----	16:37	-----	17:20	-----
<i>Ottery St Catchpole</i>	12:45	13:50	-----	20:21	-----	20:50	-----
<i>Gretna Green</i>	18:50	-----	15:33	-----	-----	-----	05:02
<i>Hogwarts</i>	20:58	-----	18:25	-----	23:55	-----	07:36
<i>Hogsmeade</i>	21:07	-----	18:34	-----	00:04	-----	07:45

Five to midnight.

2 minutes past 9 in the morning.

20 past 5 in the afternoon.

Read timetables and calculate time intervals using the 24-hour clock.

How long does the 08:45 from Diagon Alley take to reach Ottery St Catchpole?

Hogwarts Train Timetable

Route number	71	97	53	35	61	47	61
<i>Diagon Alley</i>	07:45	08:45	09:00	14:15	15:00	15:50	19:35
<i>Kings Cross</i>	08:02	09:02	09:17	14:45	15:17	16:07	19:52
<i>Little Hinging</i>	09:15	10:15	-----	16:37	-----	17:20	---
<i>Ottery St Catchpole</i>	12:45	13:50	-----	20:21	-----	20:50	-----
<i>Gretna Green</i>	18:50	-----	15:33	-----	-----	-----	05:02
<i>Hogwarts</i>	20:58	-----	18:25	-----	23:55	-----	07:36
<i>Hogsmeade</i>	21:07	-----	18:34	-----	00:04	-----	07:45

How long does the 19:52 from Kings Cross take to reach Hogsmeade?

Which is the fastest train between Kings Cross and Hogwarts?

Fri 19.1.24

LO: To multiply a 2-digit number by a 2-digit number (area model)

Maths Three Repeating Golden Threads



Quick and. efficient recall of facts and procedures



Mastery

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

Fluency

Application

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



Crucial Vocab...

multiply
exchange
column

Term Spring 1 Week beginning 23.1.23

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 up to a 4-digit number by a 1-digit number			
Multiply a 2-digit number by a 2-digit number			
Multiply a 3-digit number by a 2-digit number			
Multiply a 4-digit number by a 2-digit number			
Solve problems with multiplication			
Short division			
Divide a 4-digit number by a 1-digit number			
Divide with remainders			
Efficient division			
Solve problems with multiplication and division			

Stem sentences

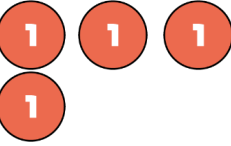
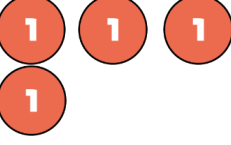
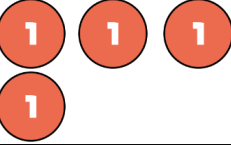
- First, I multiply ___ by ___ ones. Then I multiply ___ by ___ tens. Finally, I add together ___ and ___.
- To calculate $\text{___} \times 24$, I can do $\text{___} \times \text{___} \times \text{___}$
- To calculate $9,999 \times \text{___}$, I can do $10,000 \times \text{___} - \text{___}$
- The most efficient strategy to calculate $\text{___} \times \text{___}$ is ...
- ___ hundreds divided by ___ is equal to ___ hundreds with a remainder of ___
- Exchange the remainder, then ___ tens divided by ___ is equal to ___ tens with a remainder of ___
- Exchange the remainder, then ___ ones divided by ___ is equal to ___ ones

Thousands	Hundreds	Tens	Ones
			
			
			

1) $2,123 \times 3 =$

2) $2,123 \times 4 =$

3) $2,124 \times 3 =$

Thousands	Hundreds	Tens	Ones
			
			
			

$$1) 2,123 \times 3 = 6,369$$

$$2) 2,123 \times 4 = 6,369 + 2,123 = 8,492$$

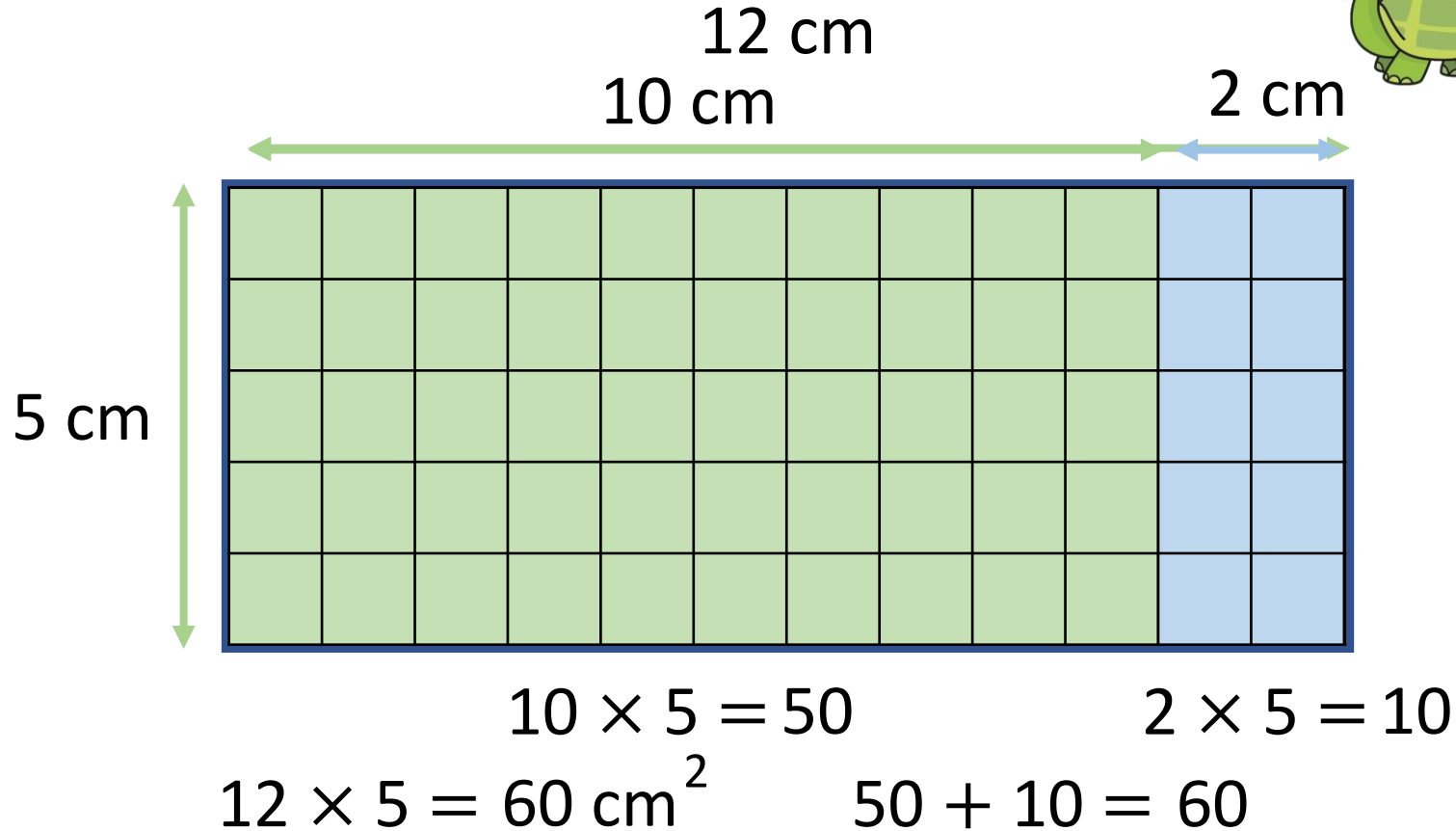
$$3) 2,124 \times 3 = 6,369 + 3 = 6,372$$



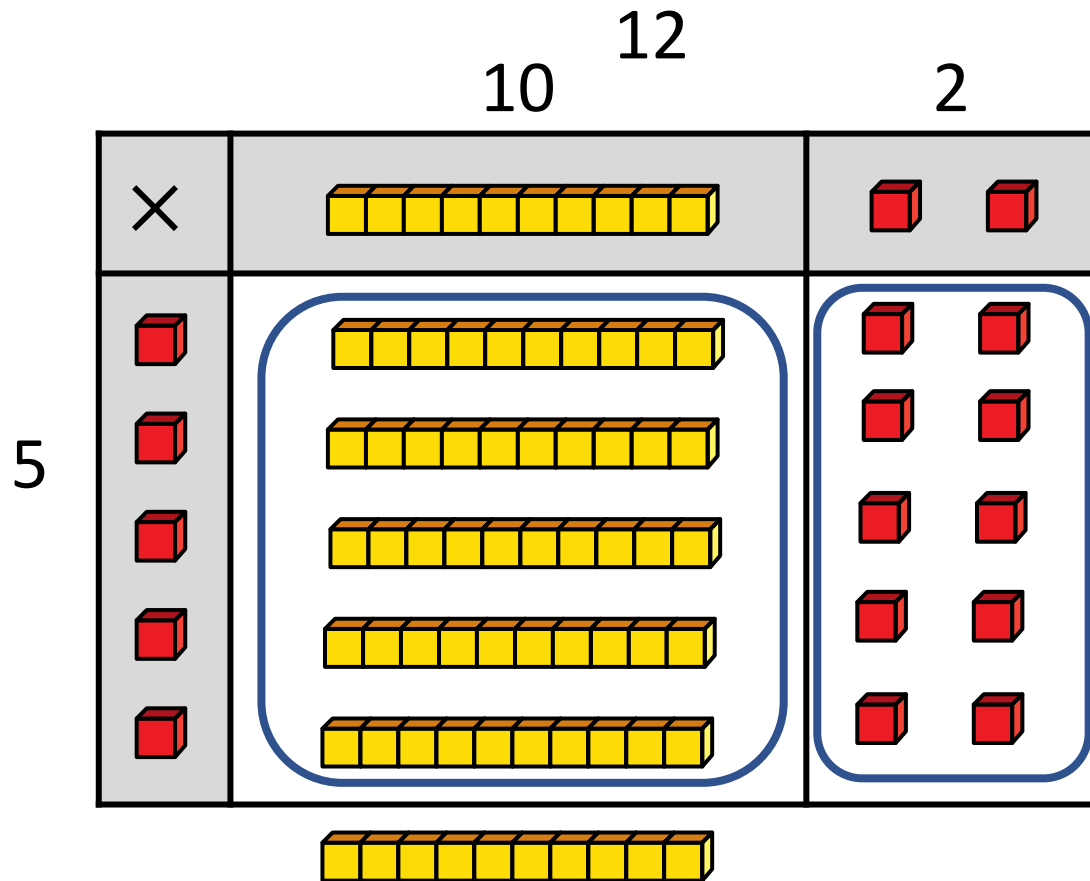
Let's learn

Get ready for today's
new learning.

Tiny is calculating the area of this rectangle.



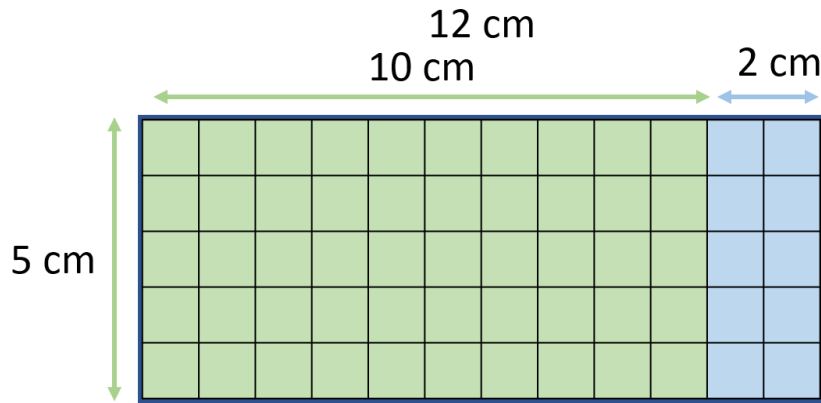
What do you notice?



There are 10 ones altogether.

There are 6 tens altogether.

60



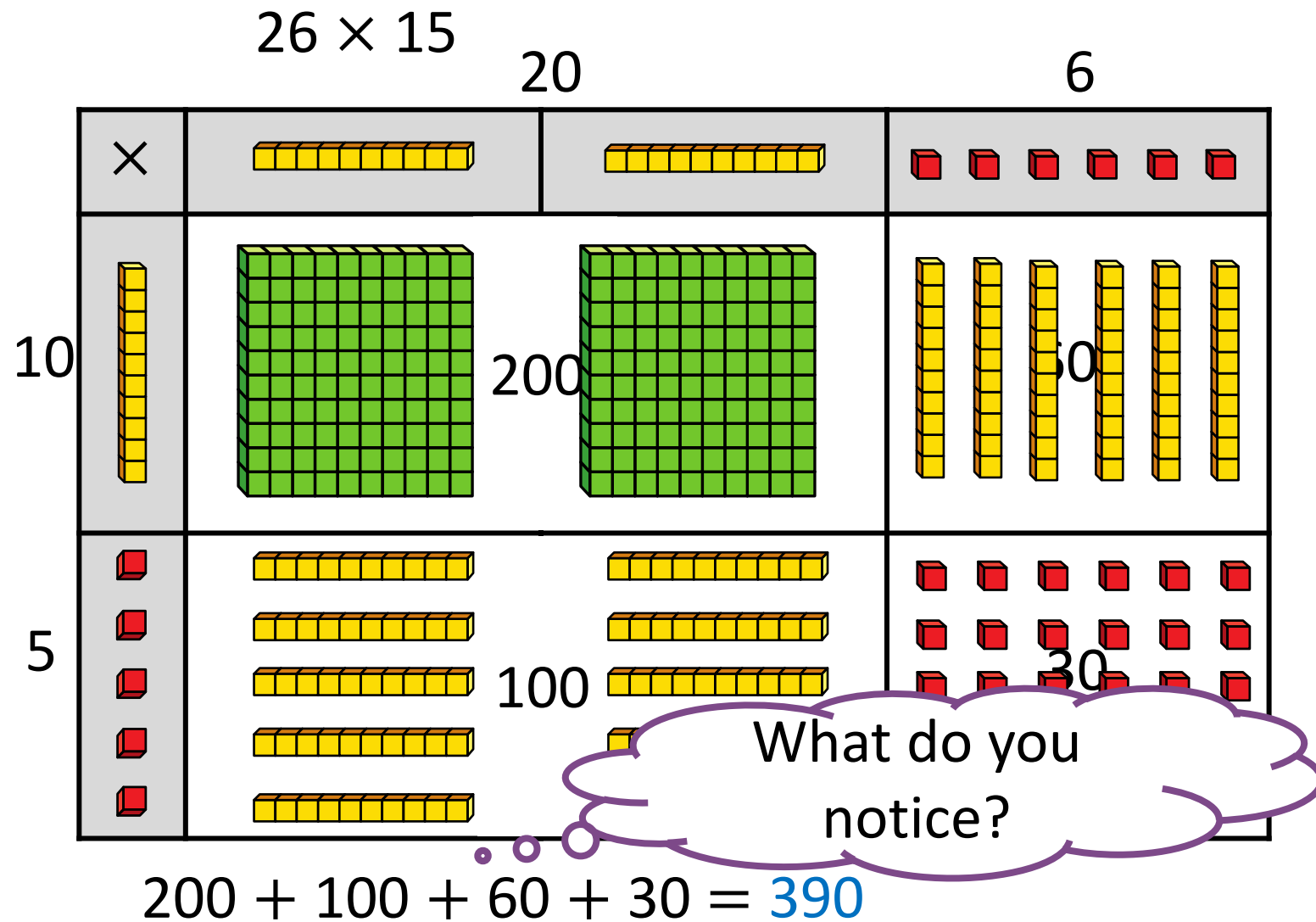
	10	12	2
×			
5			

Have a think



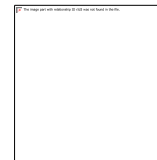
What is the
same?

What is
different?



$$14 \times 21 = 294$$

Have a think



		20	1
×			
10			
4			

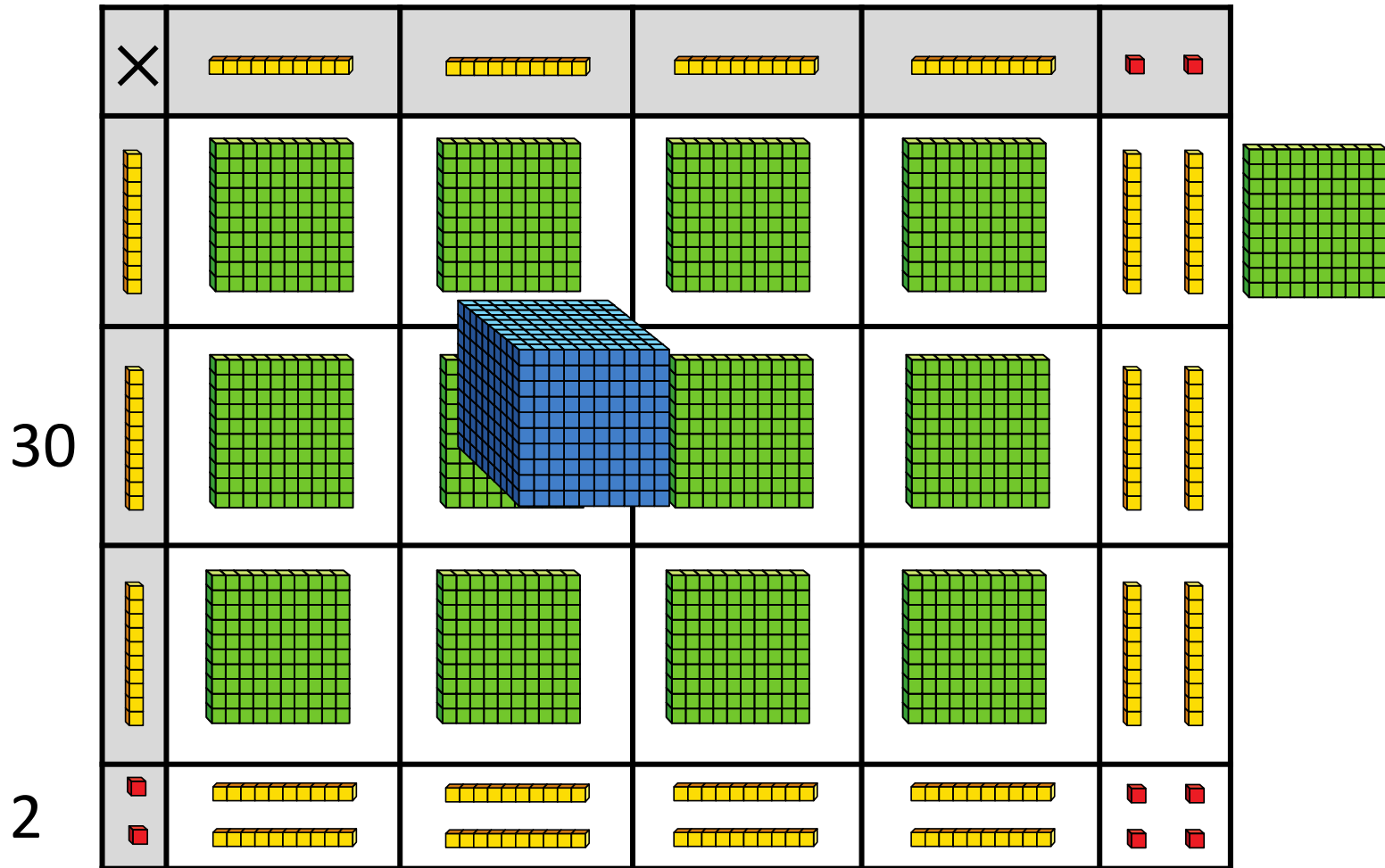
$$42 \times 32 = 1,344$$

Have a think

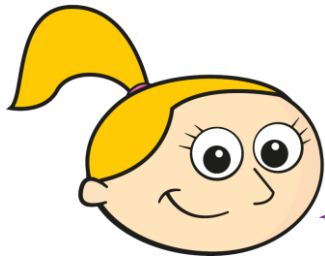


40

2



Eva is calculating $23 \times 57 =$



To multiply 23 by 57, I just need to calculate 20×50 and 3×7 and then add the products.

What mistake has Eva made?

Explain your answer.

Have a think



Eva's calculation does not include 20×7 and 50×3

Have a go at questions 1 – 4 on
the worksheet.

$$21 \times 12 = 252$$

×	10	10	1
10	100	100	10
1	10	10	1
1	10	10	1

×	20	1
10	200	10
2	40	2

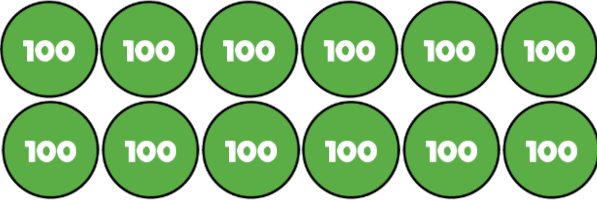
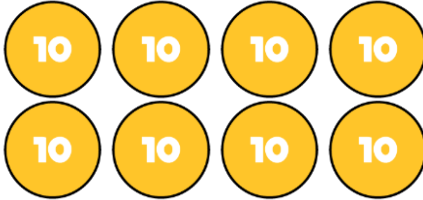
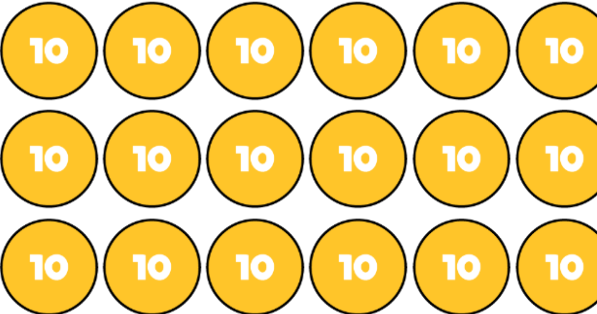
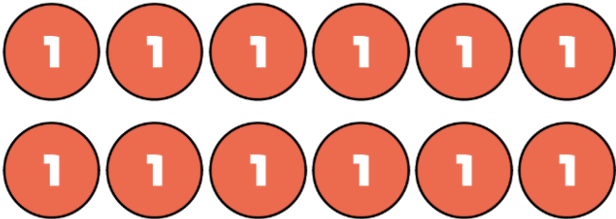
$$200 + 40 + 10 + 2 = 252$$

What is the same?

What is different?

Amir has not finished his calculation.

Fill in the missing information and write the calculation with an answer.

×	30	2
40		
6		

$$32 \times 46 = 1,472$$

Have a think



$$34 \times 23 = 782$$

Have a think

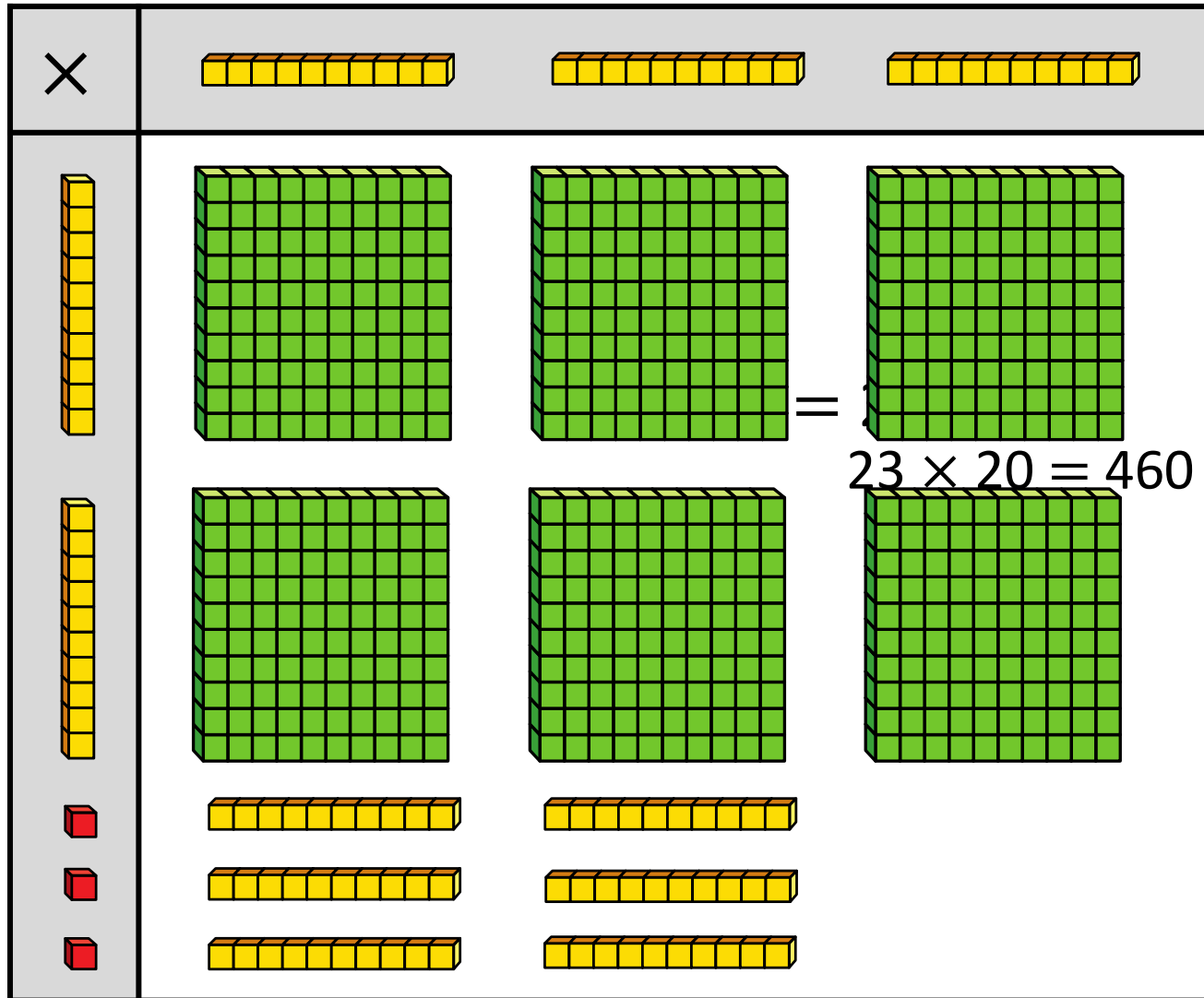


×	30	4
20	600	80
3	90	12

$$600 + 90 + 80 + 12 = 782$$

$$23 \times \square = 506$$

Have a think



$$23 \times \boxed{22} = 506$$

