Maths for week beginning 22nd February 2021

Please complete the daily work and send a copy/picture to your teacher.

5L Miss Langoo at
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4/5 W Mrs Williams (formerly Duke) at
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Practise your tables every day on Times Tables Rock Stars https://ttrockstars.com/

Contact your teacher if you need help logging into TTRS

Our February focus is the 7x

1x table	2x table	3x table	4x table	5x table	6x table
1 × 1 = 1	1 × 2 = 2	1 × 3 = 3	1 × 4 = 4	1 × 5 = 5	1 × 6 = 6
2 × 1 = 2	2 × 2 = 4	2 × 3 = 6	2 × 4 = 8	2 × 5 = 10	2 × 6 = 12
3 × 1 = 3	3 × 2 = 6	3 × 3 = 9	3 × 4 = 12	3 × 5 = 15	3 × 6 = 18
4 × 1 = 4	4 × 2 = 8	4 × 3 = 12	4 × 4 = 16	4 × 5 = 20	4 × 6 = 24
5 × 1 = 5	5 × 2 = 10	5 × 3 = 15	5 × 4 = 20	5 × 5 = 25	5 × 6 = 30
6 × 1 = 6	6 × 2 = 12	6 × 3 = 18	6 × 4 = 24	6 × 5 = 30	6 × 6 = 36
7 × 1 = 7	7 × 2 = 14	7 × 3 = 21	7 × 4 = 28	7 × 5 = 35	7 × 6 = 42
8 × 1 = 8	8 × 2 = 16	8 × 3 = 24	8 × 4 = 32	8 × 5 = 40	8 × 6 = 48
9 × 1 = 9	9 × 2 = 18	9 × 3 = 27	9 × 4 = 36	9 × 5 = 45	9 × 6 = 54
10 × 1 = 10	10 × 2 = 20	10 × 3 = 30	10 × 4 = 40	10 × 5 = 50	10 × 6 = 60
11 × 1 = 11	11 × 2 = 22	11 × 3 = 33	11 × 4 = 44	11 × 5 = 55	11 × 6 = 66
12 × 1 = 12	12 × 2 = 24	12 × 3 = 36	12 × 4 = 48	12 × 5 = 60	12 × 6 = 72

7x table	8x table	9x table	10x table	11x table	12x table
1 × 7 = 7	1 × 8 = 8	1 × 9 = 9	1 × 10 = 10	1 × 11 = 11	1 × 12 = 12
2 × 7 = 14	2 × 8 = 16	2 × 9 = 18	2 × 10 = 20	2 × 11 = 22	2 × 12 = 24
3 × 7 = 21	3 × 8 = 24	3 × 9 = 27	3 × 10 = 30	3 × 11 = 33	3 × 12 = 36
4 × 7 = 28	4 × 8 = 32	4 × 9 = 36	4 × 10 = 40	4 × 11 = 44	4 × 12 = 48
5 × 7 = 35	5 × 8 = 40	5 × 9 = 45	5 × 10 = 50	5 × 11 = 55	5 × 12 = 60
6 × 7 = 42	6 × 8 = 48	6 × 9 = 54	6 × 10 = 60	6 × 11 = 66	6 × 12 = 72
7 × 7 = 49	7 × 8 = 56	7 × 9 = 63	7 × 10 = 70	7 × 11 = 77	7 × 12 = 84
8 × 7 = 56	8 × 8 = 64	8 × 9 = 72	8 × 10 = 80	8 × 11 = 88	8 × 12 = 96
9 × 7 = 63	9 × 8 = 72	9 × 9 = 81	9 × 10 = 90	9 × 11 = 99	9 × 12 = 108
10 × 7 = 70	10 × 8 = 80	10 × 9 = 90	10 × 10 = 100	10 × 11 = 110	10 × 12 = 120
11 × 7 = 77	11 × 8 = 88	11 × 9 = 99	11 × 10 = 110	11 × 11 = 121	11 × 12 = 132
12 × 7 = 84	12 × 8 = 96	12 × 9 = 108	12 × 10 = 120	12 × 11 = 132	12 × 12 = 144

Lesson 1 LO: To recap my knowledge of fractions

Monday 22nd is DT day – no Maths or English today! Please see Foundation slides.

Lesson 1

Tuesday 23rd February 2021

LO: To recap my knowledge of fractions

Play Times Tables Rockstars every day to practise your tables
https://ttrockstars.com/

Key vocabulary:

- Fraction
- Add
- Total
- Improper fraction
- Mixed number
- Equivalent
- Convert
- Numerator
- Denominator
- Common denominator
- Simplify

Lesson 1 LO: To recap my knowledge of fractions

$\frac{3}{5}$ ← numerator ← denominator

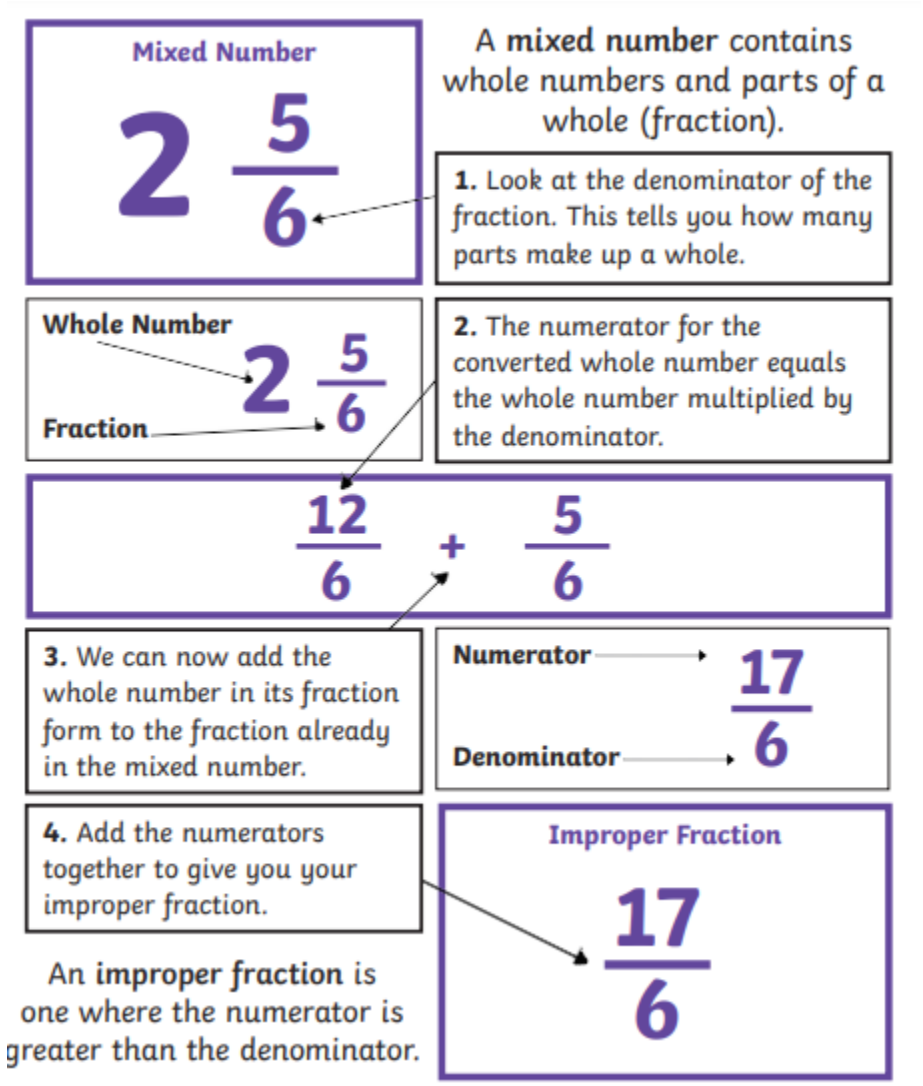
Arithmetic – equivalent fractions

1. $\frac{1}{2} = \frac{\square}{8}$	2. $\frac{3}{\square} = \frac{6}{10}$	3. $\frac{3}{4} = \frac{12}{\square}$	4. $\frac{\square}{10} = \frac{1}{2}$
5. $\frac{7}{\square} = \frac{14}{16}$	6. $\frac{2}{3} = \frac{\square}{12}$	7. $\frac{\square}{6} = \frac{4}{24}$	8. $\frac{1}{8} = \frac{2}{\square}$

Lesson 1 LO: To recap my knowledge of fractions

$\frac{3}{5}$ ← numerator
← denominator

Mixed number to improper fraction



$7\frac{1}{2}$ as an improper fraction?

1. Circle any mixed number that is equivalent to the improper fraction.

$\frac{13}{3}$	$2\frac{2}{3}$	$4\frac{1}{3}$	$5\frac{1}{3}$	$4\frac{2}{3}$	$2\frac{2}{3}$
$\frac{14}{4}$	$3\frac{2}{4}$	$4\frac{1}{2}$	$3\frac{1}{2}$	$4\frac{1}{4}$	$2\frac{1}{2}$
$\frac{16}{10}$	$1\frac{4}{10}$	$1\frac{2}{5}$	$1\frac{3}{5}$	$1\frac{6}{10}$	$1\frac{8}{10}$
$\frac{20}{6}$	$2\frac{2}{3}$	$3\frac{2}{6}$	$3\frac{2}{3}$	$2\frac{1}{3}$	$3\frac{1}{3}$
$\frac{19}{5}$	$4\frac{1}{5}$	$4\frac{2}{5}$	$3\frac{4}{5}$	$3\frac{3}{5}$	$5\frac{1}{5}$

Lesson 1 LO: To recap my knowledge of fractions

$$\frac{3}{5} \leftarrow \text{numerator} \quad \leftarrow \text{denominator}$$

Improper fraction to mixed number?

An improper fraction has a numerator that is greater than the denominator.

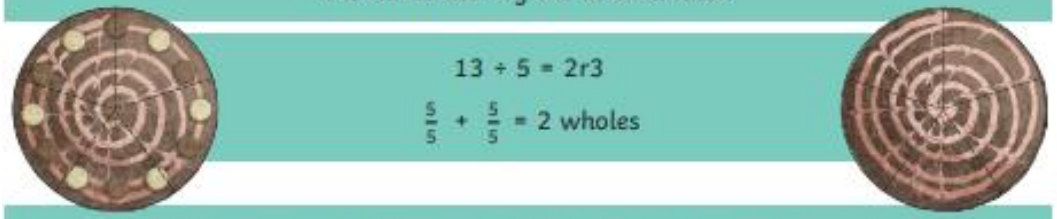
Improper Fractions

$$\frac{13}{5}$$

1. Look at the denominator of the fraction. This tells you how many parts make up a whole.

2. The numerator tells you how many parts of a whole (fifths) there are in total.

3. We can work out how many wholes are made by the improper fraction by dividing the numerator by the denominator.



$13 \div 5 = 2r3$

$\frac{5}{5} + \frac{5}{5} = 2$ wholes

4. We can then write the remainder of the third whole as a proper fraction. This remainder of 3 = $\frac{3}{5}$.

Combine the whole number and fraction to make the mixed number.

$2\frac{3}{5}$

$\frac{7}{4}$ as a mixed number?

2. Write the following improper fractions as mixed numbers.

a) $\frac{22}{3}$ = _____ b) $\frac{14}{5}$ = _____ c) $\frac{23}{10}$ = _____ d) $\frac{34}{10}$ = _____ e) $\frac{21}{5}$ = _____

f) $\frac{5}{2}$ = _____ g) $\frac{16}{3}$ = _____ h) $\frac{19}{4}$ = _____ i) $\frac{31}{4}$ = _____ j) $\frac{30}{6}$ = _____

Lesson 1 LO: To recap my knowledge of fractions

$$\frac{3}{5}$$ ← numerator, ← denominator

Improper fractions and mixed numbers

3. Twenty-seven children sit at tables of 6, filling the tables where possible. Express how many tables are filled using a mixed number.

_____

4. A teacher asks 2 children to sort 73 tennis balls into baskets of 10 balls, filling the baskets where possible. Express how many baskets are filled using a mixed number.

_____

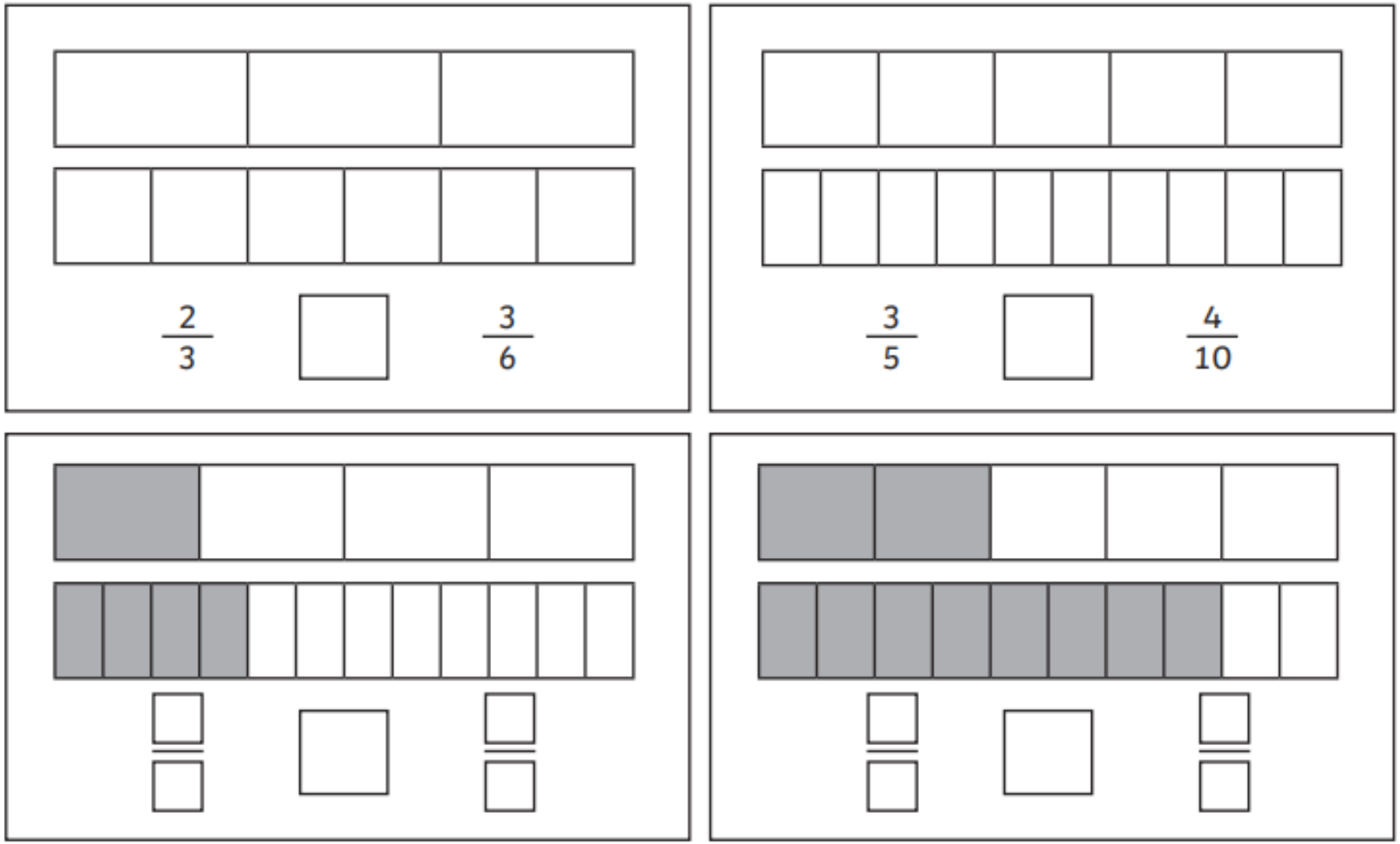
5. A pizza truck sells pizza slices. Each slice is one quarter of a pizza. At the end of the day, the pizza seller works out how many pizzas he has left. On the day he has 9 slices. How many pizzas does he have left?

_____

Lesson 1 LO: To recap my knowledge of fractions

$\frac{3}{5}$ ← numerator ← denominator

Compare and order fractions



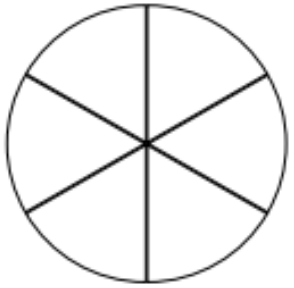
Lesson 1 LO: To recap my knowledge of fractions

$\frac{3}{5}$ ← numerator ← denominator

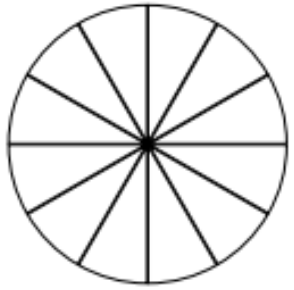
Compare and order fractions

$\frac{1}{3}$

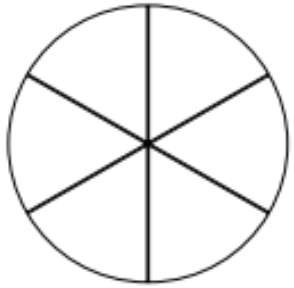
$\frac{4}{6}$



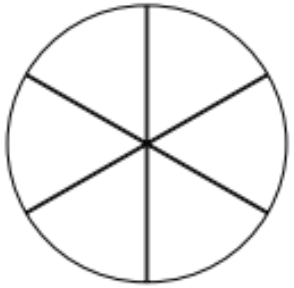
$\frac{3}{12}$



$\frac{3}{6}$



$\frac{5}{6}$



Smallest Largest

Lesson 1 LO: To recap my knowledge of fractions

$\frac{3}{5}$ ← numerator
← denominator

Add fractions

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

$$\frac{1}{2} + \frac{1}{4} = \square$$

$$\frac{1}{4} + \frac{3}{8} = \square$$

$$\frac{1}{3} + \frac{1}{6} = \square$$

$$\frac{1}{5} + \frac{7}{10} = \square$$

$$\frac{5}{7} + \frac{3}{14} = \square$$

$$\frac{1}{14} + \frac{6}{7} = \square$$

Lesson 1 LO: To recap my knowledge of fractions

Circle any mixed number that is equivalent to the improper fraction.

$\frac{13}{3}$	$2\frac{2}{3}$	**$4\frac{1}{3}$**	$5\frac{1}{3}$	$4\frac{2}{3}$	$2\frac{2}{3}$
$\frac{14}{4}$	**$3\frac{2}{4}$**	$4\frac{1}{2}$	**$3\frac{1}{2}$**	$4\frac{1}{4}$	$2\frac{1}{2}$
$\frac{16}{10}$	$1\frac{4}{10}$	$1\frac{2}{5}$	**$1\frac{3}{5}$**	**$1\frac{6}{10}$**	$1\frac{8}{10}$
$\frac{20}{6}$	$2\frac{2}{3}$	**$3\frac{2}{6}$**	$3\frac{2}{3}$	$2\frac{1}{3}$	**$3\frac{1}{3}$**
$\frac{19}{5}$	$4\frac{1}{5}$	$4\frac{2}{5}$	**$3\frac{4}{5}$**	$3\frac{3}{5}$	$5\frac{1}{5}$

Question	Answer
1	4
2	5
3	16
4	5
5	8
6	8
7	1
8	16

ANSWERS

2. Write the following improper fractions as mixed numbers.

a) $\frac{22}{3} = 7\frac{1}{3}$ b) $\frac{14}{5} = 2\frac{4}{5}$ c) $\frac{23}{10} = 2\frac{3}{10}$ d) $\frac{34}{10} = 3\frac{4}{10}$ e) $\frac{21}{5} = 4\frac{1}{5}$

f) $\frac{5}{2} = 2\frac{1}{2}$ g) $\frac{16}{3} = 5\frac{1}{3}$ h) $\frac{19}{4} = 4\frac{3}{4}$ i) $\frac{31}{4} = 7\frac{3}{4}$ j) $\frac{30}{6} = 5$

k) $\frac{21}{6} = 3\frac{1}{2}$ l) $\frac{17}{8} = 2\frac{1}{8}$ m) $\frac{19}{7} = 2\frac{5}{7}$ n) $\frac{22}{9} = 2\frac{4}{9}$ o) $\frac{27}{12} = 2\frac{3}{12}$

3. Twenty-seven children sit at tables of 6, filling the tables where possible. Express how many tables are filled using a mixed number.

$4\frac{3}{6}$ or $4\frac{1}{2}$

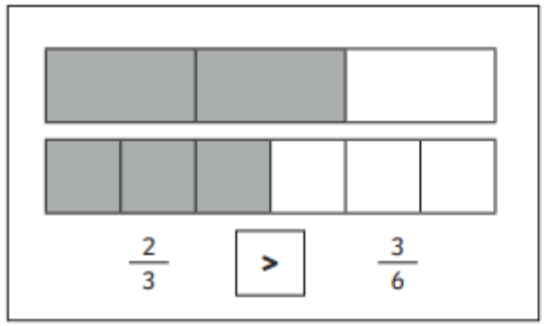
4. A teacher asks 2 children to sort 73 tennis balls into baskets of 10 balls, filling the baskets where possible. Express how many baskets are filled using a mixed number.

$7\frac{3}{10}$

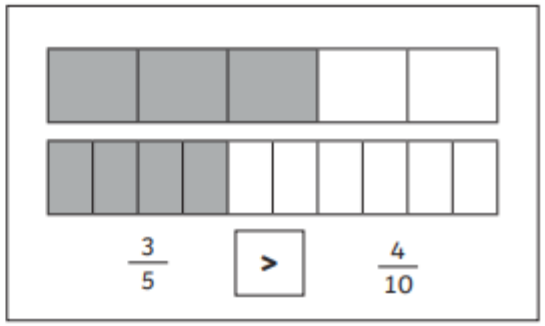
5. A pizza truck sells pizza slices. Each slice is one quarter of a pizza. At the end of the day, the pizza seller works out how many pizzas he has left. On the day he has 9 slices. How many pizzas does he have left?

$2\frac{1}{4}$

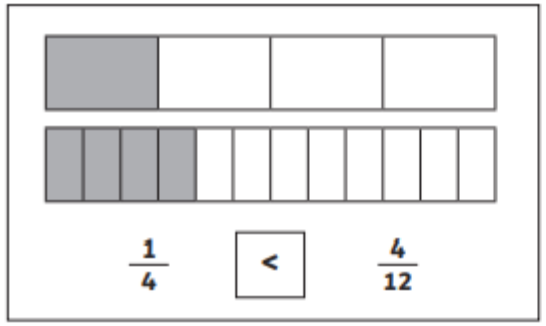
Lesson 1 LO: To recap my knowledge of fractions



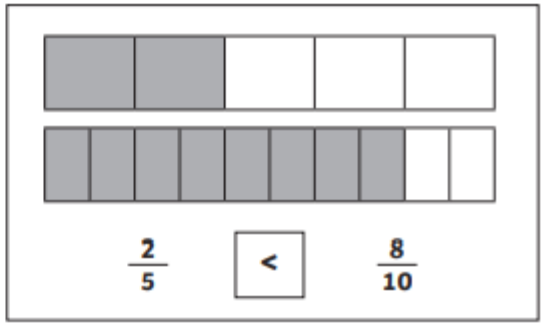
$\frac{2}{3}$ > $\frac{3}{6}$



$\frac{3}{5}$ > $\frac{4}{10}$



$\frac{1}{4}$ < $\frac{4}{12}$



$\frac{2}{5}$ < $\frac{8}{10}$

$\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$

$\frac{1}{5} + \frac{7}{10} = \frac{9}{10}$

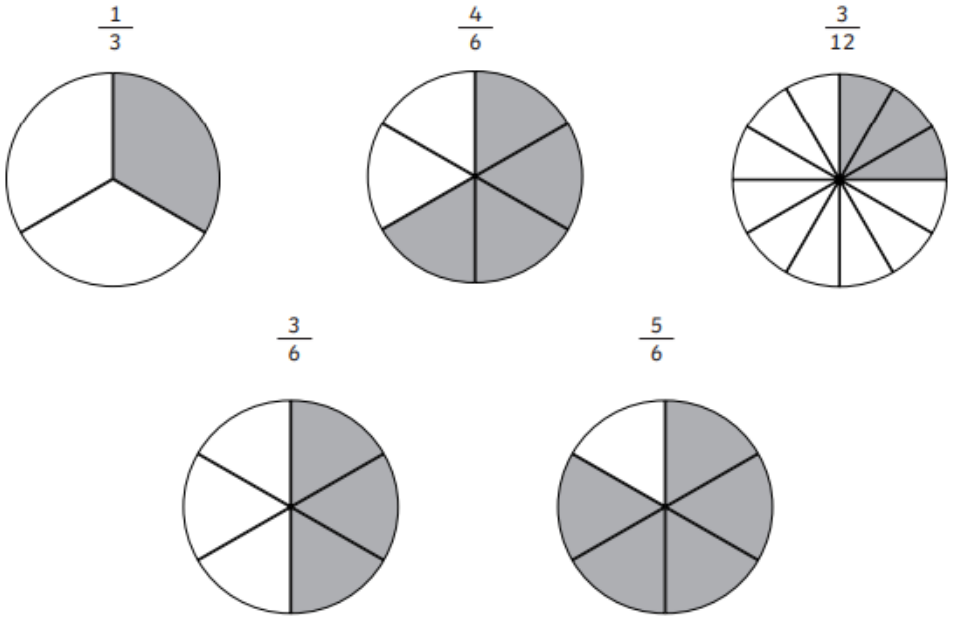
$\frac{1}{4} + \frac{3}{8} = \frac{5}{8}$

$\frac{5}{7} + \frac{3}{14} = \frac{13}{14}$

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

$\frac{1}{14} + \frac{6}{7} = \frac{13}{14}$

ANSWERS



$\frac{3}{12}$ $\frac{1}{3}$ $\frac{3}{6}$ $\frac{4}{6}$ $\frac{5}{6}$

Smallest Largest

Lesson 2

Wednesday 24th February 2021

LO: To add mixed numbers

Watch voice over:
https://youtu.be/JqFdG4FjxcO

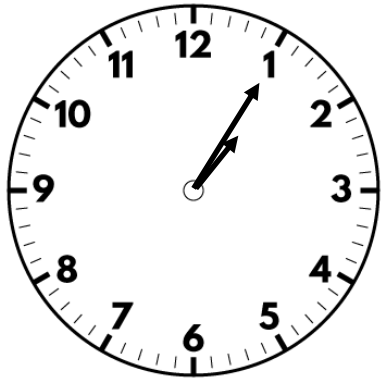
Play Times Tables Rockstars every day to practise your tables
https://ttrockstars.com/

Key vocabulary:

- Fraction
- Add
- Total
- Improper fraction
- Mixed number
- Equivalent
- Convert
- Numerator
- Denominator
- Common denominator
- Simplify

Lesson 2 LO: To add mixed numbers

Arithmetic – Flashback Four



1) Add together $\frac{2}{3}$ and $\frac{1}{6}$

2) Which is greater, $\frac{11}{5}$ or $\frac{11}{10}$?

3) Complete $\frac{7}{10} = \frac{\square}{40}$

4) Work out $5 \times 6 \times 2$

Lesson 2 LO: To add mixed numbers

Strategy:

1. Add the whole numbers
2. Add the fractions
3. Simplify the fraction
4. Add the simplified fraction to the whole number

E.g: $7\frac{1}{5} + 6\frac{3}{10} = ?$

1. Add the whole numbers -> 7 + 6 = 13

2. Add the fractions -> $\frac{1}{5} + \frac{3}{10} = \frac{5}{10}$ see explanation ->

3. Simplify the fraction -> $\frac{5}{10}$ (both parts divide by 5) = $\frac{1}{2}$

4. Add the simplified fraction to the whole number -> $13 + \frac{1}{2} = 13\frac{1}{2}$

$7\frac{1}{5} + 6\frac{3}{10} = 13\frac{1}{2}$!

Step 2: Add the fractions (explained)

Make the fractions have the same denominator $\frac{1}{5} = \frac{?}{10}$

To turn 5 into 10, we x by 2, so we also must x the top by 2 $\frac{1}{5} = \frac{2}{10}$

Now we can add the fractions $\frac{2}{10} + \frac{3}{10} = \frac{5}{10}$

White Rose Maths Video link to support the lesson:
https://vimeo.com/507550069

Lesson 2 LO: To add mixed numbers

My turn:

$1\frac{3}{4} + 6\frac{3}{20} = ?$

1. Add the whole numbers -> 1 + 6 = 7

2. Add the fractions -> Make the fractions have the same denominator $\frac{3}{4} = \frac{?}{20}$

To turn 4 into 20, we x by 5, so we also must x the numerator by 5 $\frac{3}{4} = \frac{15}{20}$

Now we can add the fractions:

$\frac{15}{20} + \frac{3}{20} = \mathbf{\frac{18}{20}}$

3. Simplify the fraction -> $\frac{18}{20}$ (both numerator and denominator divide by 2) = $\frac{9}{10}$

4. Add the simplified fraction to the whole number -> $7 + \frac{9}{10} = 7\frac{9}{10}$

$1\frac{3}{4} + 6\frac{3}{20} = 7\frac{9}{10}$

Lesson 2 LO: To add mixed numbers

Your turn:

$3\frac{1}{6} + 5\frac{4}{12} = ?$

1. Add the whole numbers -> 3 + 5 = ?

2. Add the fractions -> $\frac{1}{6} = \frac{?}{12}$ $\frac{?}{12} + \frac{4}{12} = \frac{?}{?}$

3. Simplify the fraction -> $\frac{?}{?}$ (both divide by ?) = $\frac{?}{?}$

4. Add the simplified fraction to the whole number -> ? + $\frac{?}{?}$ = ?

Lesson 2 LO: To add mixed numbers

Your turn – let's go through it

$3\frac{1}{6} + 5\frac{4}{12} = ?$

If you're not sure at this point, go back through the strategy, and my turn, and watch the White Rose Video on the strategy slide

1. Add the whole numbers -> 3 + 5 = 8

2. Add the fractions -> $\frac{1}{6} = \frac{2}{12}$ $\frac{2}{12} + \frac{4}{12} = \frac{6}{12}$

3. Simplify the fraction -> $\frac{6}{12}$ (both divide by 6) = $\frac{1}{2}$

4. Add the simplified fraction to the whole number -> $8 + \frac{1}{2} = 8\frac{1}{2}$

Well done if you got that! If you didn't, go back and go through the steps again.

Lesson 2 **LO: To add mixed numbers**

Task 1 - Fluency

Complete the calculations.

a) $1\frac{2}{5} + 2\frac{3}{10} =$ ☐

b) $2\frac{2}{5} + 2\frac{3}{10} =$ ☐

c) $1\frac{3}{4} + 3\frac{3}{20} =$ ☐

d) $1\frac{3}{16} + 4\frac{3}{4} =$ ☐

e) $4\frac{1}{4} + 2\frac{11}{16} =$ ☐

f) $1\frac{4}{15} + 3\frac{2}{3} =$ ☐

Strategy:

1. Add the whole numbers
2. Add the fractions
3. Simplify the fraction
4. Add the simplified fraction to the whole number

Lesson 2 LO: To add mixed numbers

Task 2 - Reasoning

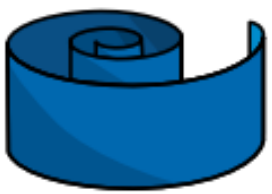
a)

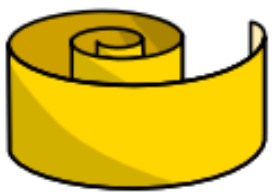
$$2\frac{3}{5} + 1\frac{7}{10} = 3 + \frac{13}{10} = 3\frac{13}{10}$$

How can Ron improve his answer?

b) A blue ribbon is $2\frac{4}{9}$ metres long.

A yellow ribbon is $3\frac{2}{3}$ metres long.

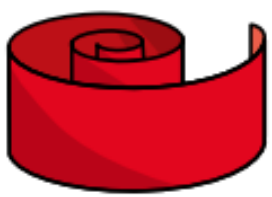




a) What is the total length of the blue and yellow ribbon?

b) A red ribbon is $1\frac{5}{18}$ metres longer than the yellow ribbon.

How long is the red ribbon?



Strategy:

1. Add the whole numbers
2. Add the fractions
3. Simplify the fraction
4. Add the simplified fraction to the whole number

Task 3 – Problem Solving

Lesson 2 LO: To add mixed numbers

Strategy:

1. Add the whole numbers
2. Add the fractions
3. Simplify the fraction
4. Add the simplified fraction to the whole number

Here are some number cards.

$3\frac{1}{6}$	$2\frac{11}{12}$	$2\frac{5}{6}$	$3\frac{5}{6}$	$4\frac{1}{12}$	$4\frac{1}{3}$

a) What is the greatest total you can make with two cards?

b) What is the smallest total you can make with two cards?

ANSWERS

Lesson 2 **LO: To add mixed numbers**

Flashback Four

1) Add together $\frac{2}{3}$ and $\frac{1}{6}$ $\frac{5}{6}$

2) Which is greater, $\frac{11}{5}$ or $\frac{11}{10}$? $\frac{11}{5}$

3) Complete $\frac{7}{10} = \frac{\square}{40}$ 28

4) Work out 5×6×2 60

Task 1 - ANSWERS

Complete the calculations.

a) $1\frac{2}{5} + 2\frac{3}{10} = 3\frac{7}{10}$

b) $2\frac{2}{5} + 2\frac{3}{10} = 4\frac{7}{10}$

c) $1\frac{3}{4} + 3\frac{3}{20} = 4\frac{9}{10}$

e) $4\frac{1}{4} + 2\frac{11}{16} = 6\frac{15}{16}$

d) $1\frac{3}{16} + 4\frac{3}{4} = 5\frac{15}{16}$

f) $1\frac{4}{15} + 3\frac{2}{3} = 4\frac{14}{15}$

Lesson 2 LO: To add mixed numbers

Task 2 - ANSWERS

a)

$2\frac{3}{5} + 1\frac{7}{10} = 3 + \frac{13}{10} = 3\frac{13}{10}$

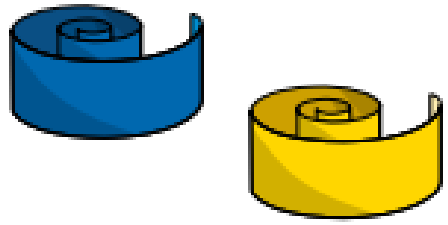
How can Ron improve his answer?

$\frac{13}{10} = 1\frac{3}{10}$ so $3\frac{13}{10} = 4\frac{3}{10}$

b)

A blue ribbon is $2\frac{4}{9}$ metres long.

A yellow ribbon is $3\frac{2}{3}$ metres long.

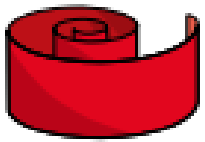


a) What is the total length of the blue and yellow ribbon?

$6\frac{1}{9}$ m

b) A red ribbon is $1\frac{5}{18}$ metres longer than the yellow ribbon.

How long is the red ribbon?



$4\frac{17}{18}$ m

Task 3 - ANSWERS

a) What is the greatest total you can make with two cards?

$8\frac{5}{12}$

b) What is the smallest total you can make with two cards?

$5\frac{3}{4}$

Once you have finished your work, **self-marked and corrected any mistakes**, please send your work to your teacher:

5L Miss Langoo at elangoo@kingsavenue.lambeth.sch.uk

4/5 W Mrs Williams at jduke@kingsavenue.lambeth.sch.uk

Lesson 3

Thursday 25th February 2021

LO: To subtract fractions

Watch voice over:
https://youtu.be/vzUoDV6Lqh0

Play Times Tables Rockstars every day to practise your tables
https://ttrockstars.com/

Key vocabulary:

- Fraction
- Subtract
- Total
- Improper fraction
- Mixed number
- Equivalent
- Convert
- Numerator
- Denominator
- Common denominator
- Simplify

Arithmetic – Flashback Four

1) Work out $\frac{7}{12} + \frac{1}{6}$

2) Which is smaller, $2\frac{3}{4}$ or $2\frac{5}{8}$?

3) How many twelfths is the same as $\frac{2}{3}$?

4) Write the Roman numeral CXL as an ordinary number

Lesson 3 LO: To subtract fractions

Exactly like adding fractions, but subtracting!

Strategy:

1. Find a common denominator
2. Change the fractions to have the same denominator
3. Subtract the numerators
4. Simplify if needed

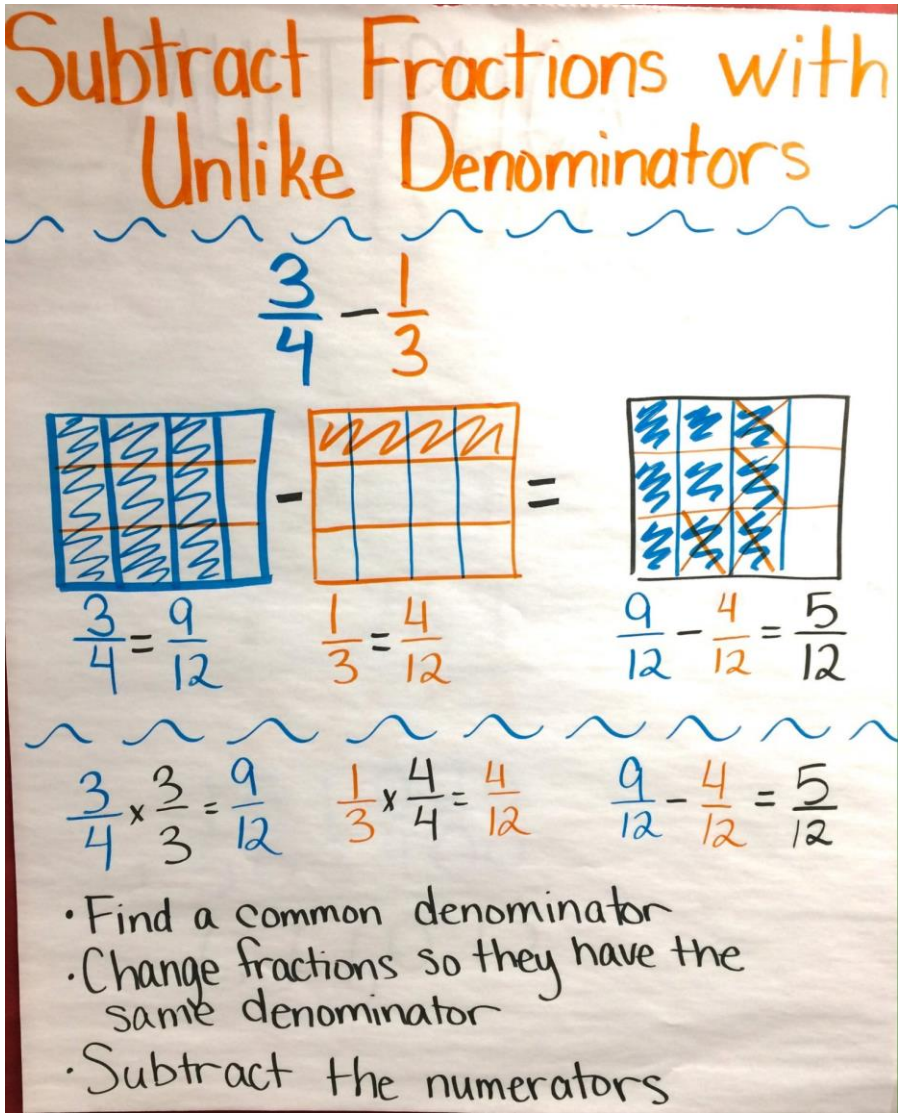
E.g: $\frac{1}{2} - \frac{3}{8} = ?$

1. Find a common denominator -> both over 8

2. Convert the fractions -> $\frac{1}{2} = \frac{?}{8}$ $\quad \frac{1}{2} \overset{\times 4}{=} \frac{4}{8}$

3. Subtract the numerators -> $\frac{4}{8} - \frac{3}{8} = \frac{1}{8}$

4. Simplify if needed -> not needed!



White Rose Maths Video to support the lesson:
https://vimeo.com/507661410

Lesson 3 LO: To subtract fractions

Strategy:

1. Find a common denominator
2. Change the fractions to have the same denominator
3. Subtract the numerators
4. Simplify if needed

My turn:

E.g: $\frac{5}{6} - \frac{1}{2} = ?$

1. Find a common denominator -> both over 6

2. Convert the fractions -> $\frac{1}{2} = \frac{?}{6}$ $\frac{1}{2} \overset{\times 3}{\underset{\times 3}{=}} \frac{3}{6}$ (multiply numerator and denominator by 3)

3. Subtract the numerators -> $\frac{5}{6} - \frac{3}{6} = \frac{2}{6}$

4. Simplify if needed -> both numerator and denominator divisible by 2

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

Lesson 3 LO: To subtract fractions

Your turn:

E.g: $\frac{5}{6} - \frac{1}{3} = ?$

Strategy:

1. Find a common denominator
2. Change the fractions to have the same denominator
3. Subtract the numerators
4. Simplify if needed

1. Find a common denominator -> both over ?

2. Convert the fractions -> $\frac{1}{3} \overset{\times ?}{=} \frac{?}{?}$ (multiply numerator and denominator by ?)

3. Subtract the numerators -> $\frac{5}{6} - \frac{?}{?} = \frac{?}{?}$

4. Simplify if needed -> both numerator and denominator divisible by ?

Lesson 3 LO: To subtract fractions

Strategy:
1. Find a common denominator
2. Change the fractions to have the same denominator
3. Subtract the numerators
4. Simplify if needed

Your turn, let's go through it

E.g: $\frac{5}{6} - \frac{1}{3} = ?$

1. Find a common denominator -> both over 6

2. Convert the fractions -> $\frac{1}{3} \overset{\times 2}{=} \frac{2}{6}$ (multiply numerator and denominator by 2)

3. Subtract the numerators -> $\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$

4. Simplify if needed -> both numerator and denominator divisible by 3

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

If you're not sure at this point, go back through the strategy, and my turn, and watch the White Rose Video on the strategy slide

Lesson 3 LO: To subtract fractions

Task 1: Fluency

a) Match the equivalent calculations.

$\frac{3}{4} - \frac{3}{20}$	$\frac{10}{20} - \frac{3}{20}$
$\frac{4}{5} - \frac{3}{20}$	$\frac{16}{20} - \frac{3}{20}$
$\frac{7}{10} - \frac{3}{20}$	$\frac{15}{20} - \frac{3}{20}$
$\frac{1}{2} - \frac{3}{20}$	$\frac{14}{20} - \frac{3}{20}$

Strategy:

1. Find a common denominator
2. Change the fractions to have the same denominator
3. Subtract the numerators
4. Simplify if needed

b) Jack walks $\frac{7}{9}$ km to school.

Aisha walks $\frac{2}{3}$ km to school.

How much further does Jack walk than Aisha?

Lesson 3 LO: To subtract fractions

Task 2: Reasoning

a)

Complete the subtractions.

a) $\frac{7}{8} - \frac{1}{16} = \square$

$\frac{5}{8} - \frac{1}{16} = \square$

$\frac{3}{8} - \frac{1}{16} = \square$

$\frac{1}{8} - \frac{1}{16} = \square$

b) $\frac{6}{7} - \frac{2}{21} = \square$

$\frac{5}{7} - \frac{4}{21} = \square$

$\frac{4}{7} - \frac{6}{21} = \square$

$\frac{3}{7} - \frac{8}{21} = \square$

What do you notice?

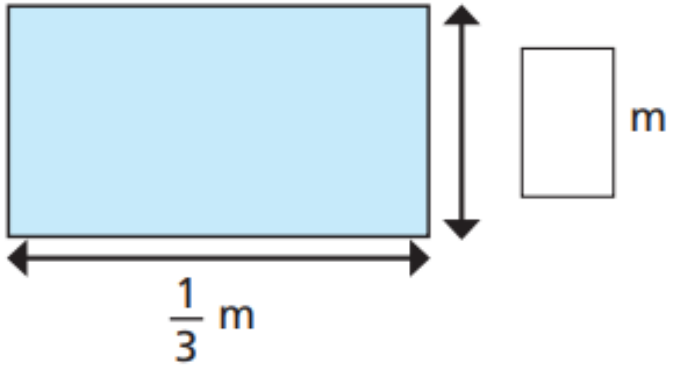
Strategy:

1. Find a common denominator
2. Change the fractions to have the same denominator
3. Subtract the numerators
4. Simplify if needed

b)

The perimeter of the rectangle is $\frac{14}{15}$ m.

Work out the missing length.



Remember, perimeter is length of all 4 sides added together. 2 long sides are equal, 2 short sides are equal.

Lesson 3 LO: To subtract fractions

Task 3: Problem Solving

Here are some fraction cards.

$\frac{1}{3}$	$\frac{5}{6}$	$\frac{1}{2}$	$\frac{11}{12}$	$\frac{3}{4}$

a) Which two fractions have a difference of $\frac{1}{4}$?

b) Which two fractions have a difference of $\frac{1}{2}$?

c) Which two fractions have a difference of $\frac{1}{12}$?

Give two possible pairs.

Strategy:

1. Find a common denominator
2. Change the fractions to have the same denominator
3. Subtract the numerators
4. Simplify if needed

Lesson 3 LO: To subtract fractions

ANSWERS
Flashback Four

1) Work out $\frac{7}{12} + \frac{1}{6}$ $\frac{9}{12}$ or $\frac{3}{4}$

2) Which is smaller, $2\frac{3}{4}$ or $2\frac{5}{8}$? $2\frac{5}{8}$

3) How many twelfths is the same as $\frac{2}{3}$? 8

4) Write the Roman numeral CXL as an ordinary number 140

Task 1 Answers

Match the equivalent calculations.

$\frac{3}{4} - \frac{3}{20}$	$\frac{10}{20} - \frac{3}{20}$
$\frac{4}{5} - \frac{3}{20}$	$\frac{16}{20} - \frac{3}{20}$
$\frac{7}{10} - \frac{3}{20}$	$\frac{15}{20} - \frac{3}{20}$
$\frac{1}{2} - \frac{3}{20}$	$\frac{14}{20} - \frac{3}{20}$

Jack walks $\frac{1}{9}$ km further than Aisha.

Lesson 3 LO: To subtract fractions

ANSWERS
Task 2

a) $\frac{7}{8} - \frac{1}{16} = \boxed{\frac{13}{16}}$

$\frac{5}{8} - \frac{1}{16} = \boxed{\frac{9}{16}}$

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

$\frac{1}{8} - \frac{1}{16} = \boxed{\frac{1}{16}}$

b) $\frac{6}{7} - \frac{2}{21} = \boxed{\frac{16}{21}}$

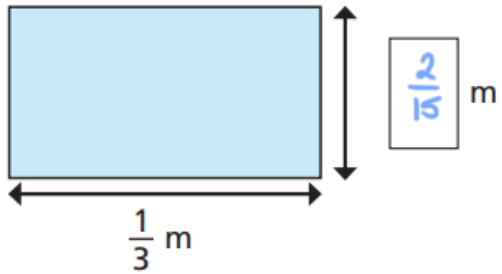
$\frac{5}{7} - \frac{4}{21} = \boxed{\frac{11}{21}}$

$\frac{4}{7} - \frac{6}{21} = \boxed{\frac{6}{21}}$

$\frac{3}{7} - \frac{8}{21} = \boxed{\frac{1}{21}}$

The perimeter of the rectangle is $\frac{14}{15}$ m.

Work out the missing length.



Task 3 Answers

a) Which two fractions have a difference of $\frac{1}{4}$?

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

b) Which two fractions have a difference of $\frac{1}{2}$?

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

c) Which two fractions have a difference of $\frac{1}{12}$?

Give two possible pairs.

$\boxed{\frac{11}{12}} - \boxed{\frac{5}{6}} = \frac{1}{12}$

$\boxed{\frac{5}{6}} - \boxed{\frac{3}{4}} = \frac{1}{12}$

Once you have finished your work, **self-marked and corrected any mistakes**, please send your work to your teacher:

5L Miss Langoo at elangoo@kingsavenue.lambeth.sch.uk

4/5 W Mrs Williams at jduke@kingsavenue.lambeth.sch.uk

Lesson 4

Friday 26th February 2021

LO: To subtract mixed numbers

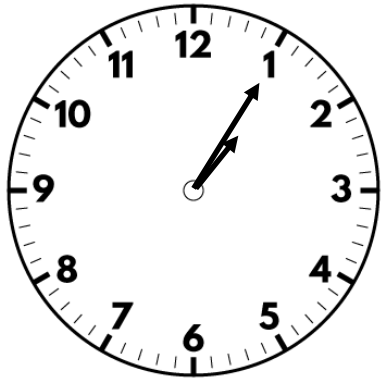
Watch voice over:
https://youtu.be/fT_Hh5G1wu4

Play Times Tables Rockstars every day to practise your tables
https://ttrockstars.com/

Key vocabulary:

- Fraction
- Subtract
- Total
- Improper fraction
- Mixed number
- Whole
- Equivalent
- Convert
- Numerator
- Denominator
- Common denominator
- Simplify

Arithmetic – Flashback Four



1) Work out $\frac{1}{5} + \frac{1}{10} + \frac{1}{20}$

2) Work out $\frac{7}{9} - \frac{2}{9}$

3) Write $\frac{18}{5}$ as a mixed number.

4) What is 634 ÷ 1 ?

Lesson 4 LO: To subtract mixed numbers

Subtracting mixed numbers: simple equations

Some mixed number subtractions are no different to subtracting fractions.

Strategy:

1. Ignore the whole number
2. Subtract the fractions (make the denominator the same)
3. Simplify the fraction
4. Add the simplified fraction to the whole number

E.g: $7\frac{3}{5} - \frac{1}{10} = ?$

1. Ignore the whole number (7)

If you are unsure on Step 2, go back through Lesson 2 slides.

2. Subtract the fractions -> $\frac{3}{5} = \frac{6}{10}$ $\frac{6}{10} - \frac{1}{10} = \frac{5}{10}$

3. Simplify the fraction -> $\frac{5}{10}$ (both parts divide by 5) = $\frac{1}{2}$

4. Add the simplified fraction to the whole number -> $7 + \frac{1}{2} = 7\frac{1}{2}$

Lesson 4 LO: To subtract mixed numbers

Task 1: Fluency

1)

Complete the subtractions.

a) $3\frac{1}{4} - \frac{5}{24} =$ ☐

b) $3\frac{3}{16} - \frac{1}{8} =$ ☐

c) $2\frac{5}{6} - \frac{2}{3} =$ ☐

d) $7\frac{5}{6} - \frac{13}{24} =$ ☐

e) $4\frac{4}{9} - \frac{4}{27} =$ ☐

f) $6\frac{11}{12} - \frac{3}{4} =$ ☐

Strategy:

1. Ignore the whole number
2. Subtract the fractions
3. Simplify the fraction
4. Add the simplified fraction to the whole number

2)

A jug contains $1\frac{3}{5}$ litres of orange juice.

Eva pours $\frac{4}{15}$ litres into a glass.

How much orange juice is left in the jug?

Lesson 4 LO: To subtract mixed numbers

Task 2: Reasoning and Problem Solving

1) Three children take part in throwing competitions.

Here is the table of results.

	Javelin	Shot Put	Discus
Dexter	$15\frac{1}{4}$ m	$7\frac{5}{12}$ m	
Amir	$13\frac{3}{8}$ m		$12\frac{7}{8}$ m
Annie		9 m	$11\frac{5}{12}$ m

Use the clues to complete the table.

- Annie's javelin throw is $\frac{11}{12}$ m less than Dexter's.
- Amir's shot put throw is $\frac{3}{4}$ m less than Annie's.
- Dexter's discus throw is $\frac{1}{2}$ m less than Amir's.

Strategy:

1. Ignore the whole number
2. Subtract the fractions
3. Simplify the fraction
4. Add the simplified fraction to the whole number

2) Find three different ways to complete the calculation.

$$3\frac{\square}{5} - \frac{\square}{20} = 3\frac{1}{20}$$

Are there any other ways to complete this calculation?

Lesson 4 LO: To subtract mixed numbers

Task 2: Reasoning and Problem Solving

Strategy:

1. Ignore the whole number
2. Subtract the fractions
3. Simplify the fraction
4. Add the simplified fraction to the whole number

3) I have two whole pizzas and three quarters of another pizza. I eat five eighths of one of the pizzas. How much pizza is left?

Isla has drawn a picture to represent this word problem and find the answer.

a) Has she drawn her picture correctly? _____

b) What is the answer that Isla found? _____

4) $1\frac{5}{6} - \frac{10}{12} = 1$

This answer is wrong. They have forgotten to write the fraction that comes after the whole.

Do you agree with Katie? Explain your answer.

Lesson 4 LO: To subtract mixed numbers

ANSWERS
Flashback Four

1) Work out $\frac{1}{5} + \frac{1}{10} + \frac{1}{20}$ $\frac{7}{20}$

2) Work out $\frac{7}{9} - \frac{2}{9}$ $\frac{5}{9}$

3) Write $\frac{18}{5}$ as a mixed number. $3\frac{3}{5}$

4) What is 634 ÷ 1 ? 634

Task 1 Answers

Complete the subtractions.

a) $3\frac{1}{4} - \frac{5}{24} =$ $3\frac{1}{24}$

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

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

d) $7\frac{5}{6} - \frac{13}{24} =$ $7\frac{7}{24}$

e) $4\frac{4}{9} - \frac{4}{27} =$ $4\frac{8}{27}$

f) $6\frac{11}{12} - \frac{3}{4} =$ $6\frac{1}{6}$

There are $1\frac{1}{3}$ litres of orange juice left in the jug.

Lesson 4 LO: To subtract mixed numbers

ANSWERS
Task 2

Here is the table of results.

	Javelin	Shot Put	Discus
Dexter	$15\frac{1}{4}$ m	$7\frac{5}{12}$ m	$12\frac{3}{8}$ m
Amir	$13\frac{3}{8}$ m	$8\frac{1}{4}$ m	$12\frac{7}{8}$ m
Annie	$14\frac{1}{3}$ m	9 m	$11\frac{5}{12}$ m

Find three different ways to complete the calculation.

e.g.

$3\frac{\boxed{1}}{5} - \frac{\boxed{3}}{20} = 3\frac{1}{20}$

$3\frac{\boxed{3}}{5} - \frac{\boxed{11}}{20} = 3\frac{1}{20}$

$3\frac{\boxed{2}}{5} - \frac{\boxed{7}}{20} = 3\frac{1}{20}$

a) *Yes, Isla's picture is correct.*

b) *$2\frac{1}{8}$ is left.*

Katie is wrong. $\frac{5}{6}$ is equivalent to $\frac{10}{12}$ so $1\frac{5}{6} - \frac{10}{12} = 1$. There is no leftover fraction.

Once you have finished your work, **self-marked and corrected any mistakes**, please send your work to your teacher:

5L Miss Langoo at elangoo@kingsavenue.lambeth.sch.uk

4/5 W Mrs Williams at jduke@kingsavenue.lambeth.sch.uk