

15.2.22

LO: To subtract 2 mixed numbers.

I know that mixed numbers are comprised of whole numbers and remaining fractions.

I can subtract 2 mixed numbers.

I understand the relationship between mixed numbers and improper fractions.

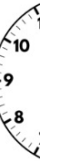
Flashback 4.

Flashback

4

Year 5 | Wee

- 1) Work out $3\frac{1}{2} + 2\frac{1}{4}$
- 2) Add $\frac{3}{7}$ and $\frac{5}{14}$
- 3) Change $5\frac{3}{7}$ to an improper fraction.
- 4) What number is 600 less than 4,371?



Flashback 4

Year 5 |

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GET READY

1) $4 - 1 =$

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

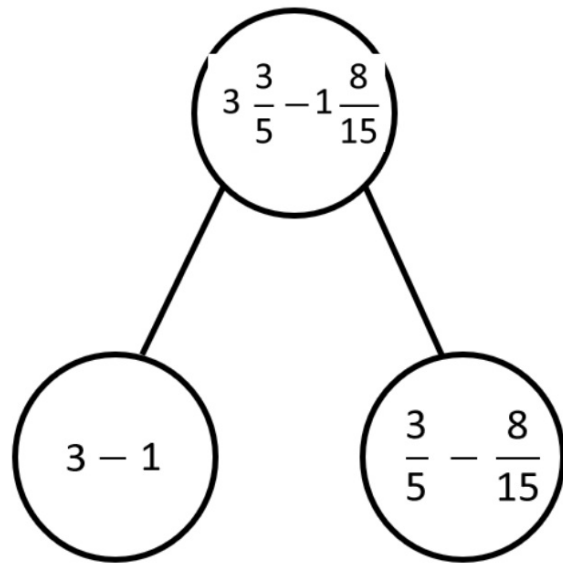
3) $4\frac{7}{12} - 1\frac{1}{6} =$

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

5) What did you notice about questions 3) and 4)?



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



$$3 - 1 =$$

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

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

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

We need to turn these mixed numbers into improper fractions.

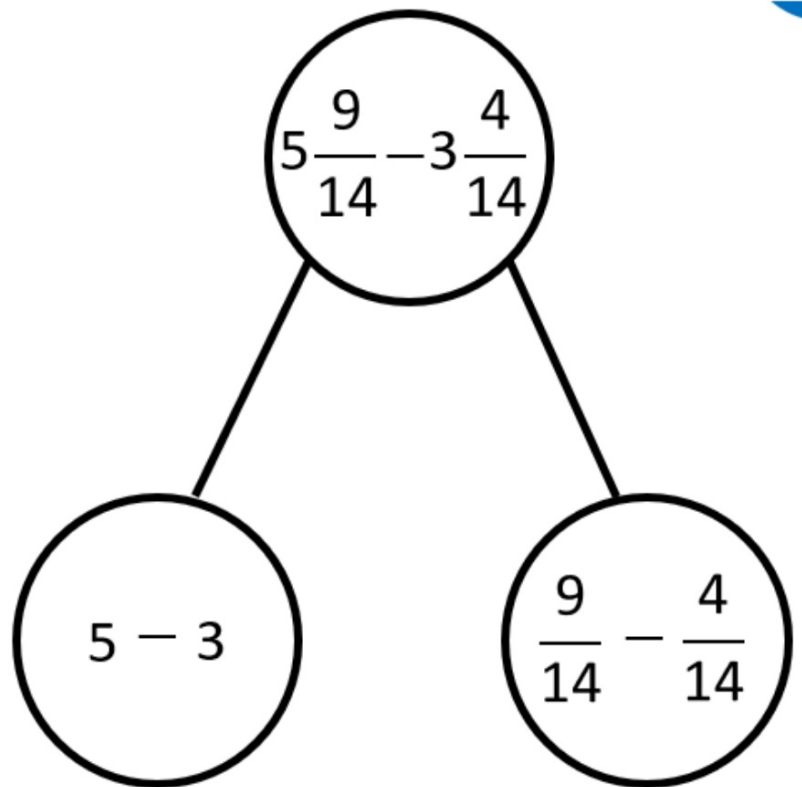
Then, subtract using the bar model. Write the answer as a mixed number.



Use the whole-part model method to subtract these mixed numbers.

Don't forget to convert first!

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

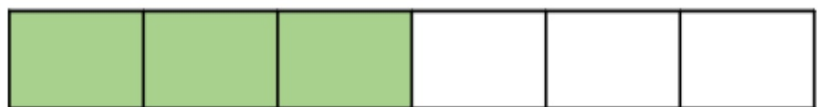
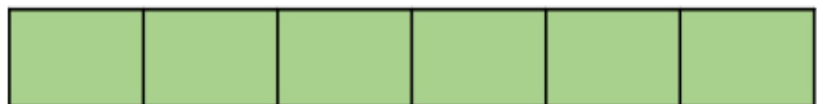
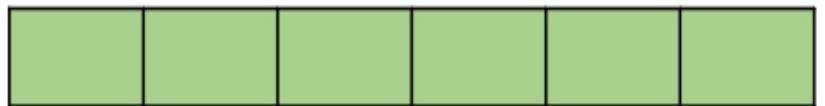


Use the bar model method to subtract these mixed numbers.

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

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

The conversion has been done for you, but now these mixed numbers need to be improper fractions!



Have a go at questions 1 and 2.

5 B's Brain Book Board Budd Boss

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



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

Amir

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

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



Alex

Whose method do you prefer?

- 2 Use your preferred method to complete the subtractions.

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

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

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

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

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

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

How much further does Car B travel than Car A?



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



You can't use my
method because you can't do
 $\frac{1}{5} - \frac{2}{5}$

Amir

- a) 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 calculation.

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

- 5 Dexter is subtracting fractions.



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

Explain the mistake that Dexter has made.

Extension activity:

There are three colours of dog biscuits in a bag of dog food: red, brown and orange.

The total mass of the dog food is 7 kg.

The mass of red biscuits is $3\frac{3}{4}$ kg and the mass of the brown biscuits is $1\frac{7}{16}$ kg.

What is the mass of orange biscuits?

Rosie has 20

Annie has 6

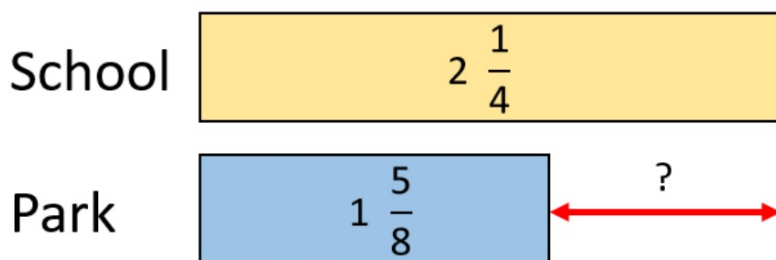
How much rit

How much rit
altogether?

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?



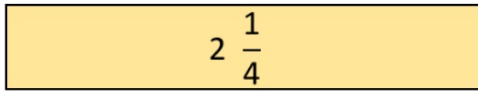
$$2\frac{1}{4} - 1\frac{5}{8} =$$

Have a think



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

School



Park



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

Convert these fractions first.

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

*Now convert to improper fractions
and subtract!*

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

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

Have a go at questions 3, 4 and 6.

5 B's
Brain
Book
Board
Budd
Boss

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



First subtract 2 from 3,
then subtract $\frac{1}{4}$ from $\frac{1}{2}$
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Convert to an improper
fraction first, $\frac{7}{2} - \frac{9}{4}$, then

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



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



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Rosie has $20\frac{3}{4}$ cm of ribbon.

Annie has $6\frac{7}{8}$ cm less ribbon than Rosie.

How much ribbon does Annie have?

How much ribbon do they have altogether?

True or False?

Subtract 2 mixed numbers

$2\frac{5}{6}$ is $\frac{15}{12}$ greater than $1\frac{7}{12}$

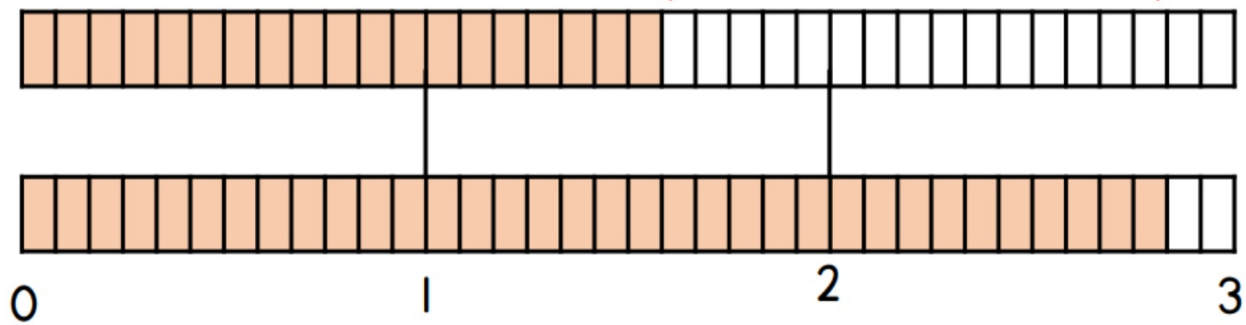
True or False ?

Subtract 2 mixed numbers

True

$$1\frac{7}{12}$$

$$1\frac{5}{12}$$



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

**Year 5
NUMERACY
TARGET GRIDS**

I can read Roman numerals to 1000 (M) and recognise years written in numerals.

I can solve number problems and practical problems that involve all of the below.

I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.

I can use negative numbers in context; count forwards and backwards with positive and negative whole numbers through 0

I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.

I know what each digit represents in numbers to 1 000 000.

I can read, write, order and compare numbers to at least 1 000 000.

Number and Place Value

I can use all 4 rules of number to solve multi-step problems.

I can use rounding to check answers to calculations.

I can subtract mentally using increasingly large numbers.

I can add mentally using increasingly large numbers.

I can subtract numbers with up more than 4 digits

I can add whole numbers with more than 4 digits.

Addition and Subtraction

I can solve \times and \div problems, scaling by fractions and ratio.

I can solve problems involving \times and \div including factors, multiples square and cubes.

I can recognise and use square and cube numbers.

I can \times and \div whole numbers and decimals by 10, 100 and 1000.

I can multiply and divide numbers mentally.

I can divide numbers up to 4 digits by a one or two-digit number.

I can multiply numbers up to 4 digits by a one or two-digit number.

I can establish whether a number is prime and recall prime numbers up to 19.

I know and use the vocabulary of prime numbers, prime factors and composite.

I can identify multiples and factors including finding all factor pairs.

Multiplication and Division

I can use all four operations to solve problems involving measure using decimal notation, including scaling.

I can solve problems involving converting between units of time.

I can estimate the volume and capacity.

I can estimate the area of irregular shapes.

I can calculate and compare the area of rectangles (including squares)

I can measure and calculate the perimeter of composite rectilinear shapes in centimetres & metres.

I understand and use approximate equivalences between metric units and imperial units such as inches & pounds

I can convert between different units of metric measure.

Measurements

I can solve problems involving decimals to 3 decimal places.

I can read and order numbers with 3 decimal places.

I can round decimals with 2 decimal places to the nearest whole number & to one decimal place.

I can recognise and use 1000ths and relate them to 10ths, 100ths and decimal equivalents.

I can multiply proper fractions and mixed numbers by whole numbers.

I can $+$ and $-$ fractions with the same denominator and denominators that are multiples of the same number.

I can recognise mixed number and improper fractions and convert from one form to another.

I can identify, name and write equivalent fractions of a given fraction.

I can compare and order fractions whose denominators are all multiples of the same number.

Fractions

I can identify, describe and represent the position of a shape following a reflection or translation.

I can distinguish between regular and irregular polygons.

I can use the properties of rectangles to deduce related facts and find missing lengths and angles.

I can identify other multiples of 90°

I can identify angles at point on a straight line and $1/2$ a turn.

I can identify angles at a point and one whole turn.

I can draw angles and measure them in degrees ($^\circ$)

I know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles.

I can identify 3-D shapes, including cubes and other cuboids from 2-D drawings.

Geometry

I can read and write decimal numbers as fractions.

I can write $\frac{1}{10}$ as a fraction and decimal equivalents.

I can complete, read and interpret information in tables including timetables.

I can solve 'difference' problems using information presented in a line graph.

I can solve 'sum' problems using information presented in a line graph.

I can solve 'comparison' problems using information presented in a line graph.

Statistics