8.2.22

LO: To add mixed numbers.

I know that mixed numbers are made of whole numbers and remainders.

I can add mixed numbers.

I understand that I must add the whole numbers (integers) first, then add the remaining parts.

Flashback 4.

Flashback 4

Yea

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 or number

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

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

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4) Write the Roman numeral CXL as a
    number

Match each number to a description.
Each number can be matched with more than one description.

$\frac{1}{3}$ $\frac{9}{2}$ $2\frac{8}{3}$ $\frac{4}{7}$ $7\frac{2}{5}$

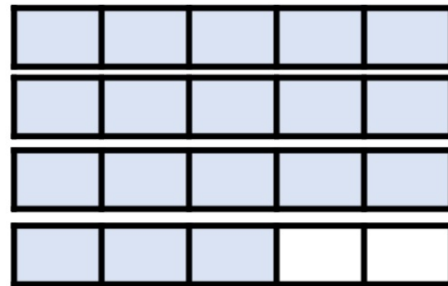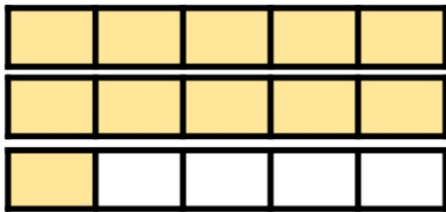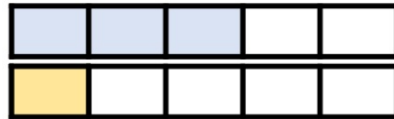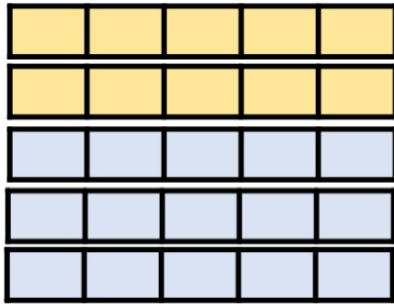| Non-unit fraction | Unit fraction |
Improper fraction	Proper fraction
Less than 1	Mixed number
Greater than 1	Incorrectly written

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

I'm going to convert both mixed numbers to improper fractions first

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

I'm going to add my whole numbers and fractions separately.

How many remaining fifths?

How many wholes are there?

I'm going to convert them both to improper fractions first

$$2\frac{1}{5} = \frac{11}{5} \qquad\qquad 3\frac{3}{5} = \frac{18}{5}$$

$$2\frac{1}{5} + 3\frac{3}{5} = \frac{29}{5} \text{ or } 5\frac{4}{5}$$

I'm going to add my whole numbers and fractions separately.

$$2 + 3 = 5 \qquad\qquad \frac{1}{5} + \frac{3}{5} = \frac{4}{5}$$

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

Whose method do you prefer? Why?

Have a think

To work this out, let's start by adding all the whole numbers.

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

Next, we need to convert these fractions so their denominators are the same.

$$\frac{1}{4} + \frac{5}{12}$$

Finally, add the new whole number to the remaining fraction!

Have a go at questions 1 – 5.

5 B's:
Brain
Book
Board
Buddy
Boss

1. Teddy and Mo are adding mixed numbers.

Teddy: $3\frac{1}{4} + 2\frac{5}{8} = 5 + \frac{7}{8} = 5\frac{7}{8}$

Mo: $3\frac{1}{4} + 2\frac{5}{8} = \frac{26}{8} + \frac{21}{8} = \frac{47}{8} = 5\frac{7}{8}$

Whose method do you prefer?

2. Complete the calculations.

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

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

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

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

How can Ron improve his answer?

4. Complete the additions.

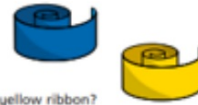a) $2\frac{3}{4} + 3\frac{5}{12} = \boxed{}$

b) $3\frac{2}{3} + 2\frac{7}{12} = \boxed{}$

c) $5\frac{1}{6} + 3\frac{11}{12} = \boxed{}$

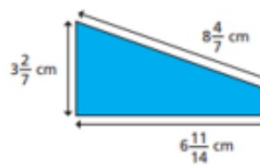d) $6\frac{7}{15} + 3\frac{3}{5} = \boxed{}$

5. 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?

6. Calculate the perimeter of the triangle.

$8\frac{4}{7}$ cm

$3\frac{2}{7}$ cm

$6\frac{11}{14}$ cm

Extension activity:

Jack and Whitney have some juice.

Jack drinks $2\frac{1}{4}$ litres and Whitney drinks $2\frac{5}{12}$ litres.

How much do they drink altogether?

Complete this using two different methods.

Which method do you think is more efficient? Why?

Fill in the miss

$4 \dfrac{5}{6} +$

$2\dfrac{1}{15}$ m

$2\dfrac{1}{15} + 1\dfrac{4}{5} =$

$2\dfrac{1}{15}$ m

In this rectangle each longer side is $1\dfrac{4}{5}$ m longer than each shorter side.

What is the perimeter of the rectangle?

Have a go at question 6.

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Book
Board
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Boss

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

can Ron improve his answer?

---

4 Complete the additions.

a) $2\frac{3}{4} + 3\frac{5}{12} = \boxed{}$

b) $3\frac{2}{3} + 2\frac{7}{12} = \boxed{}$

c) $5\frac{1}{6} + 3\frac{11}{12} = \boxed{}$

d) $6\frac{7}{15} + 3\frac{3}{5} = \boxed{}$

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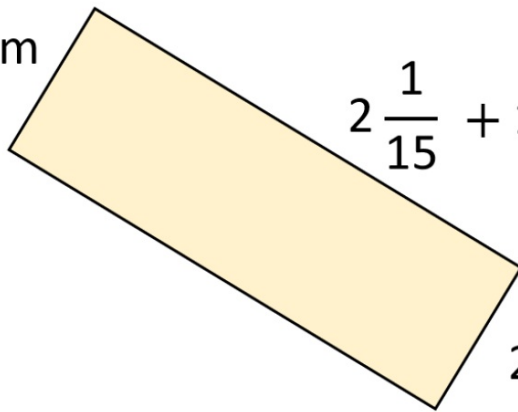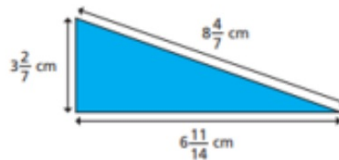
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Fill in t

4

True or False?

$$5 \frac{3}{8} + 2 \frac{7}{8} = 7 \frac{10}{8}$$

White Rose Maths

True

$$5\dfrac{3}{8} + 2\dfrac{7}{8} = 7\dfrac{10}{8}$$

It may also be useful to convert and simplify the improper fraction to a mixed number, giving the answer $8\dfrac{2}{8}$ or $8\dfrac{1}{4}$

Year 5 NUMERACY TARGET GRIDS

Number and Place Value

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.

Addition and Subtraction

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.

Multiplication and Division

I can solve X and + problems, scaling by fractions and ratio.

I can solve problems involving X and + including factors, multiples square and cubes.

I can recognise and use square and cube numbers.

I can X and + 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.

Measurements

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.

Fractions

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 1one 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.

Geometry

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 (°)

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.

Statistics

I can read and write decimal numbers as fractions.

I can write % 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.