

7.2.22

LO: To add 3 or more fractions.

I know what multiples are and how they can help with fractions.

I can add 3 or more fractions.

I understand that all the denominators must be the same before adding 2 or more fractions.

Flashback 4.

Flashback 4

Year 5

- 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 $5 \times 6 \times 2$

Flashback 4

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

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

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

GET READY 

1) $\square = 54 + 77 + 46$

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

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3) $\frac{3}{7} = \frac{\square}{21} = \frac{15}{\square}$

LET'S LEARN

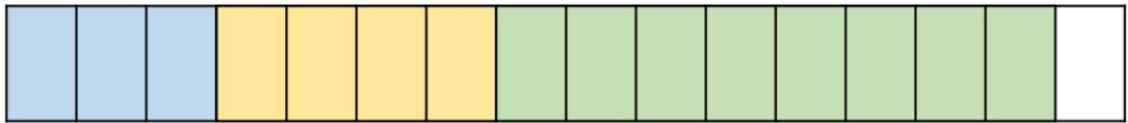
How can we convert all these fractions into $\frac{\quad}{16}$?

$$\frac{3}{16} + \frac{1}{4} + \frac{1}{2} =$$



Now we can add all the numerators together!

$$\frac{3}{16} + \frac{1}{4} + \frac{1}{2} =$$
$$\frac{4}{16} + \frac{8}{16}$$



What should these fractions be converted into?

Have a think



$$\frac{1}{2} + \frac{1}{6} + \frac{3}{24} =$$



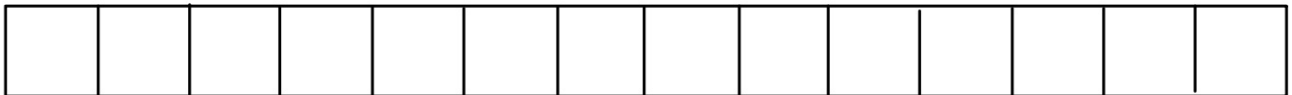
On whiteboards, convert the fractions then add the numerators!

Dexter eats $\frac{3}{14}$ of a cake.

Eva eats $\frac{1}{7}$ of the same cake.

Mo eats one half of the same cake.

How much of the cake is eaten?



Which fractions do we need to convert?

What must we convert them into?

$$\frac{3}{14}$$

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

$$\frac{1}{2}$$

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Then we add together all the numerators.

Which fraction is equivalent to $\frac{12}{14}$?

Whole part
model

Complete questions 1 - 4.

5 B's:
Brain
Book
Board
Buddy
Boss

- 1 Complete the additions.
Use bar models to help you.

a) $\frac{1}{2} + \frac{1}{4} + \frac{1}{12} = \square$

b) $\frac{1}{2} + \frac{1}{3} + \frac{1}{12} = \square$

c) $\frac{2}{3} + \frac{1}{6} + \frac{1}{12} = \square$

d) $\frac{1}{3} + \frac{1}{4} + \frac{1}{6} = \square$

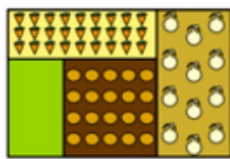
- 2 Complete the additions.

a) $\frac{1}{5} + \frac{3}{10} + \frac{7}{20} = \square$

b) $\frac{1}{16} + \frac{5}{32} + \frac{3}{8} = \square$

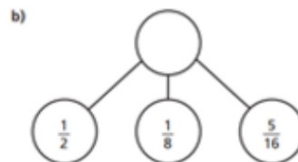
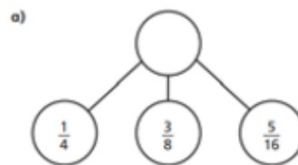
c) $\frac{1}{4} + \frac{5}{24} + \frac{5}{12} = \square$

- 3 Rosie has a vegetable patch.
 $\frac{2}{9}$ of the patch contains carrots.
 $\frac{5}{18}$ of the patch contains potatoes.
 $\frac{1}{3}$ of the patch contains onions.



What fraction of the patch contains carrots, potatoes or onions?

- 4 Complete the part-whole models.



- 5 Fill in the missing numerators.

a) $\frac{1}{8} + \frac{\square}{16} + \frac{3}{8} = \frac{5}{8}$

b) $\frac{1}{8} + \frac{\square}{16} + \frac{3}{8} = \frac{7}{8}$

c) $\frac{1}{4} + \frac{\square}{16} + \frac{3}{8} = \frac{3}{4}$

Extension activity:

Eva is attempting to answer:

$$\frac{3}{5} + \frac{1}{10} + \frac{3}{20}$$



$$\frac{3}{5} + \frac{1}{10} + \frac{3}{20} = \frac{7}{35}$$

Do you agree with Eva?
Explain why.

Jack h
get an

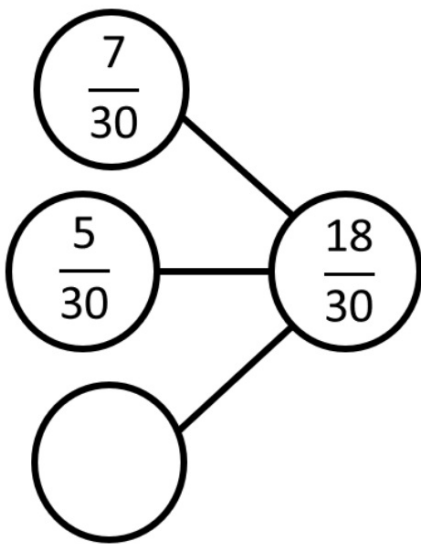


What.
Can y

How can we convert all these fractions into $\frac{\quad}{30}$?

$$\frac{7}{30} + \frac{1}{6} + \frac{\square}{5} = \frac{3}{5}$$

What other digit do we need?



$$\frac{\boxed{7}}{30} + \frac{1}{6} + \frac{\square}{5} = \frac{3}{5}$$

$$\frac{\boxed{5}}{30} + \frac{\square}{30} = \frac{\boxed{18}}{30}$$

If we multiplied by 6 to make $\overline{30}$, what do we need to do to convert it back?



5

6

30

Think about the inverse!

Complete question 5.

5 B's:
Brain
Book
Board
Buddy
Boss

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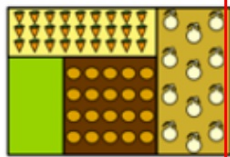
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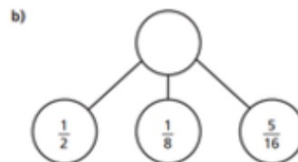
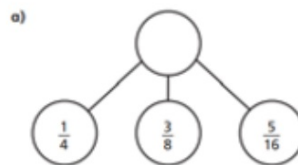
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Extension activity:

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Do you agree with Eva?
Explain why.

Jack has added 3 fractions together to
get an answer of $\frac{17}{18}$



What 3 fractions could he have added?

Can you find more than one answer?

True or False ?

Add 3 or more fractions

Rosie, Mo and Eva are painting a wall.
Rosie has painted $\frac{1}{5}$, Mo has painted $\frac{6}{20}$
and Eva has painted $\frac{4}{10}$

They have $\frac{1}{10}$ left to paint.



Jack

True or False ?

Add 3 or more fractions

True

$$\begin{aligned} & \frac{1}{5} + \frac{6}{20} + \frac{4}{10} + \frac{1}{10} \\ = & \frac{2}{10} + \frac{3}{10} + \frac{4}{10} + \frac{1}{10} \\ = & \frac{10}{10} \end{aligned}$$

**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 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