

Monday 11th January

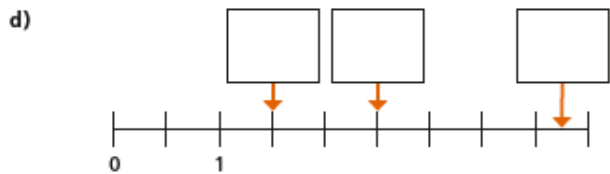
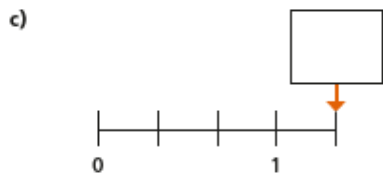
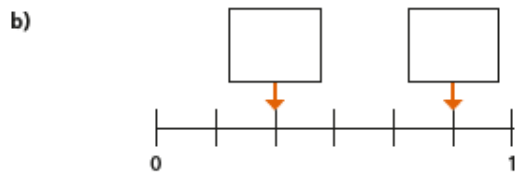
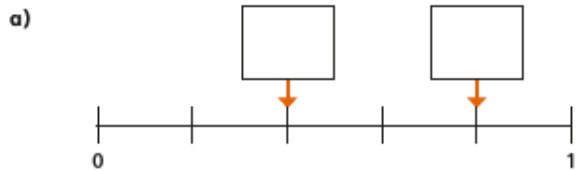
Fractions on a number line

Watch the video link and answer the following questions

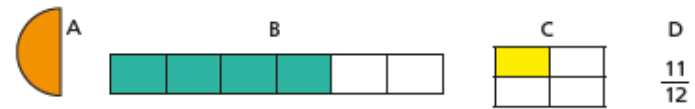
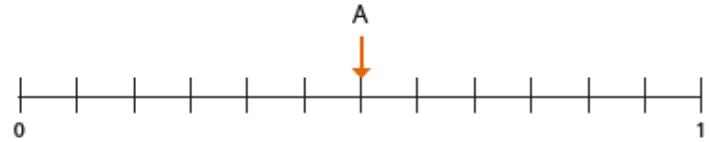
<https://vimeo.com/468943588>

Fractions on a number line

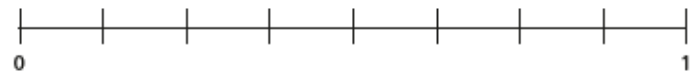
1 Fill in the boxes to label the fractions on the number line.



2 Label the number line with the representations.
The first one has been done for you.



3 Label the number line with the fractions.
Explain your method.



$\frac{3}{4}$

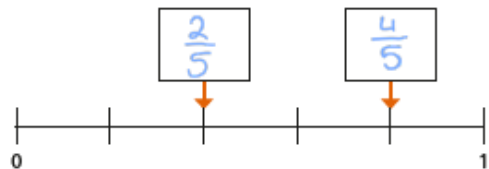
$\frac{1}{2}$

$\frac{3}{8}$

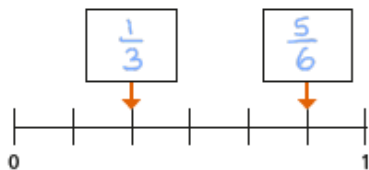
Fractions on a number line

1 Fill in the boxes to label the fractions on the number line.

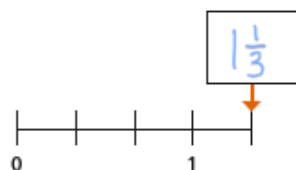
a)



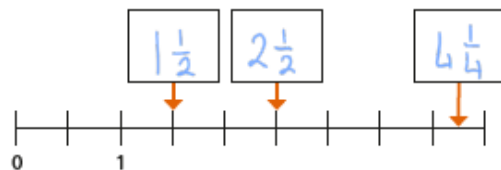
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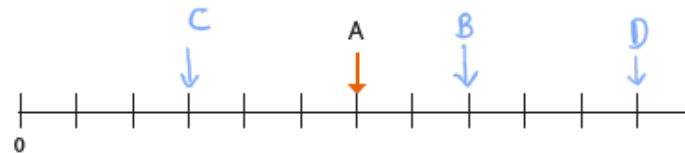
c)



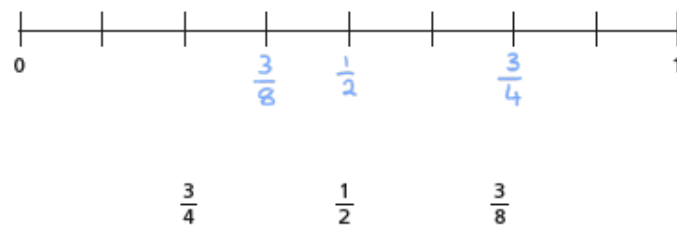
d)

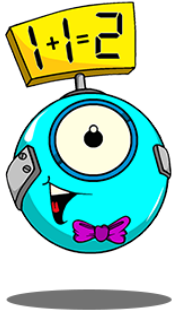


2 Label the number line with the representations. The first one has been done for you.



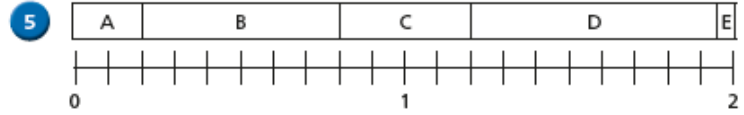
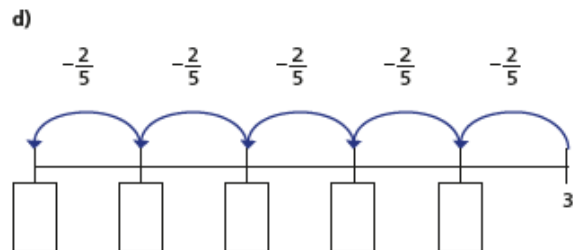
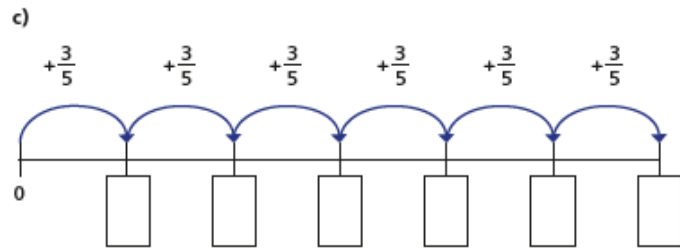
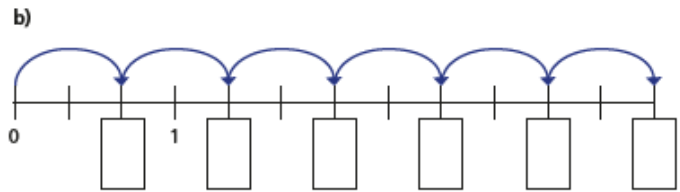
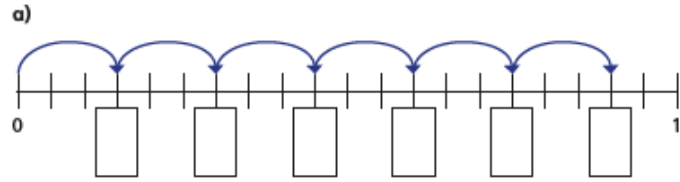
3 Label the number line with the fractions. Explain your method.





CHALLENGE QUESTIONS

4 Write a fraction in each box on the number lines.



How wide is each section of the bar model?

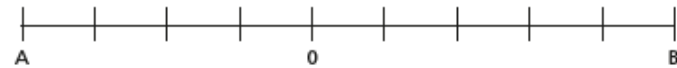
Write each answer in its simplest form.

A = C = E =

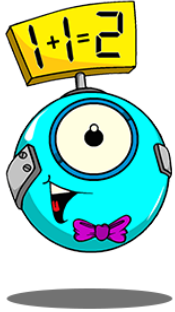
B = D =

6 The difference between A and B is 3

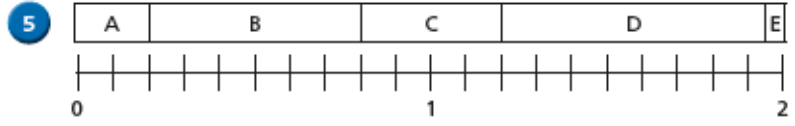
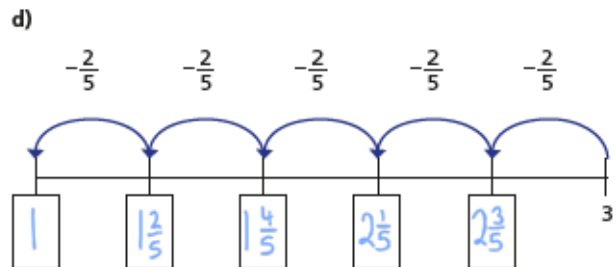
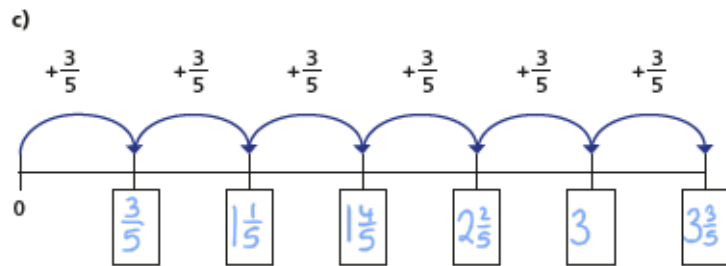
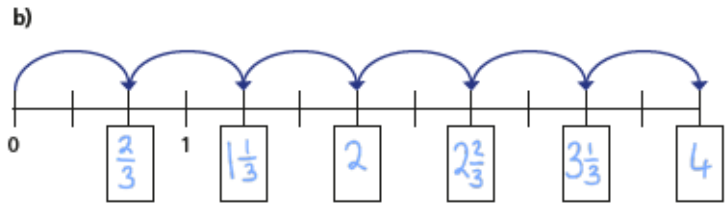
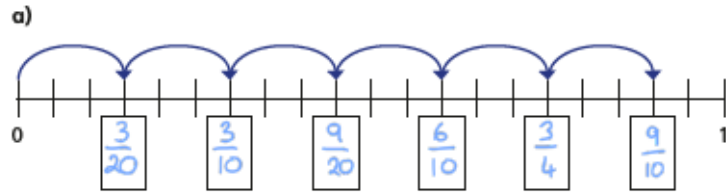
What are the values of A and B?



A = B =



4 Write a fraction in each box on the number lines.

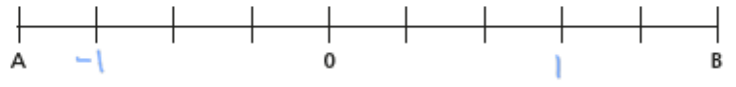


How wide is each section of the bar model?

Write each answer in its simplest form.

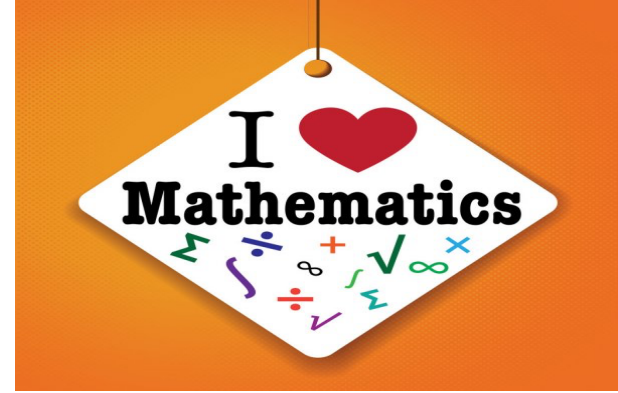
A = $\frac{1}{5}$ C = $\frac{2}{15}$ E = $\frac{1}{20}$
 B = $\frac{3}{5}$ D = $\frac{3}{4}$

6 The difference between A and B is 3
 What are the values of A and B?



A = $-\frac{1}{3}$ B = $\frac{2}{3}$





Tuesday 12th January

To compare and order fractions.

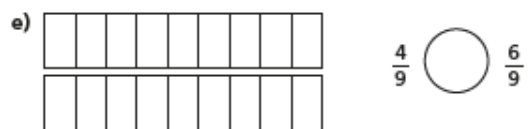
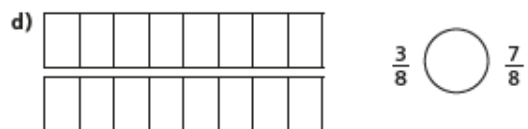
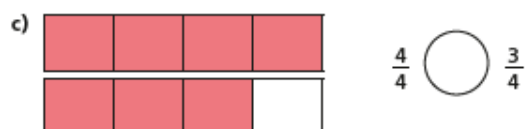
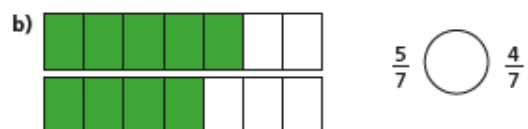
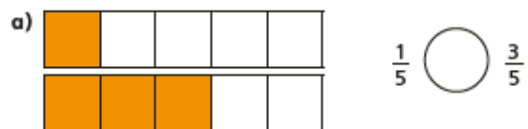
Watch the video link and answer the following questions

<https://vimeo.com/468944608>

Compare and order (denominator)

1 Write $<$, $>$ or $=$ to compare the fractions.

Use the bar models to help you.



f) What do you notice about your answers?

g) Complete the sentence.

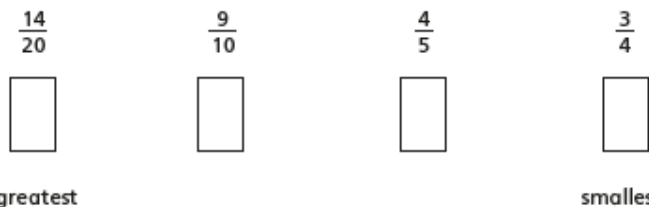
When the denominators are the same, the _____

the numerator, the _____ the fraction.

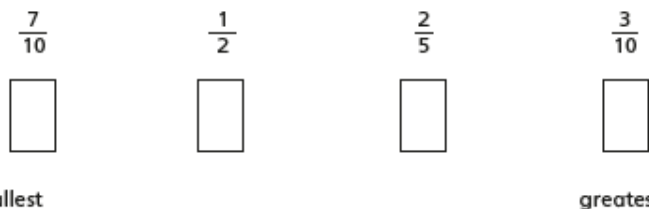
2 a) Colour the bar models to show the fractions.



b) Use the bar models to sort these fractions in order from greatest to smallest.



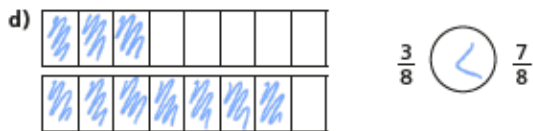
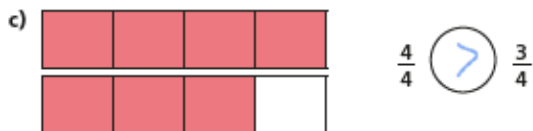
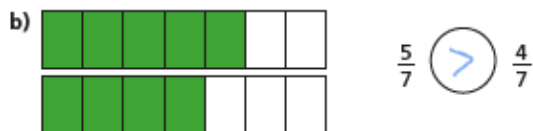
c) Order the fractions from smallest to greatest.



Compare and order (denominator)

1 Write $<$, $>$ or $=$ to compare the fractions.

Use the bar models to help you.



f) What do you notice about your answers?

g) Complete the sentence.

When the denominators are the same, the greater the numerator, the greater the fraction. (or smaller/smaller)

2 a) Colour the bar models to show the fractions.



b) Use the bar models to sort these fractions in order from greatest to smallest.

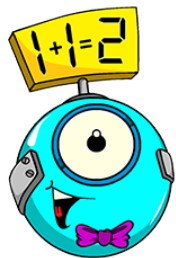


greatest smallest

c) Order the fractions from smallest to greatest.



smallest greatest



CHALLENGE QUESTIONS

- 3 Amir is comparing the fractions $\frac{4}{15}$ and $\frac{3}{10}$

$$\frac{4}{15} = \frac{8}{30} \quad \frac{3}{10} = \frac{9}{30}$$

$\frac{9}{30}$ is greater than $\frac{8}{30}$

$\frac{3}{10}$ is greater than $\frac{4}{15}$

Explain Amir's method.

- 4 Ron and Rosie are practising penalties.

Ron scored 7 out of 10.

Rosie scored 23 out of 30

I scored more than you, so I should take penalties for the school team.



I did not miss as many as you, so I should take the penalties.



Compare fractions to explain who should take penalties for the school team.

- 5 Write $<$, $>$ or $=$ to compare the fractions.

a) $\frac{3}{4}$ ○ $\frac{5}{6}$

d) $\frac{3}{5}$ ○ $\frac{5}{7}$

b) $\frac{2}{3}$ ○ $\frac{5}{9}$

e) $\frac{9}{10}$ ○ $\frac{3}{4}$

c) $\frac{2}{3}$ ○ $\frac{7}{8}$

f) $\frac{9}{10}$ ○ $\frac{19}{20}$

- 6 Annie, Tommy and Kim are making flags for the school fair.

Annie has completed $3\frac{3}{4}$ flags, Tommy has completed $3\frac{2}{3}$ flags and Kim has completed $\frac{18}{5}$ flags.

Who has completed the most flags?



- 3 Amir is comparing the fractions $\frac{4}{15}$ and $\frac{3}{10}$

$$\frac{4}{15} = \frac{8}{30} \quad \frac{3}{10} = \frac{9}{30}$$

$\frac{9}{30}$ is greater than $\frac{8}{30}$

$\frac{3}{10}$ is greater than $\frac{4}{15}$

Explain Amir's method.

Amir used equivalent fractions to find a common denominator and then compared the numerators.

- 4 Ron and Rosie are practising penalties.

Ron scored 7 out of 10.

Rosie scored 23 out of 30

I scored more than you, so I should take penalties for the school team.



I did not miss as many as you, so I should take the penalties.



Compare fractions to explain who should take penalties for the school team.

$\frac{7}{10} = \frac{21}{30}$ $\frac{23}{30} > \frac{21}{30}$ Rosie should take penalties for the school team.

- 5 Write $<$, $>$ or $=$ to compare the fractions.

a) $\frac{3}{4} < \frac{5}{6}$

d) $\frac{3}{5} < \frac{5}{7}$

b) $\frac{2}{3} > \frac{5}{9}$

e) $\frac{9}{10} > \frac{3}{4}$

c) $\frac{2}{3} < \frac{7}{8}$

f) $\frac{9}{10} < \frac{19}{20}$

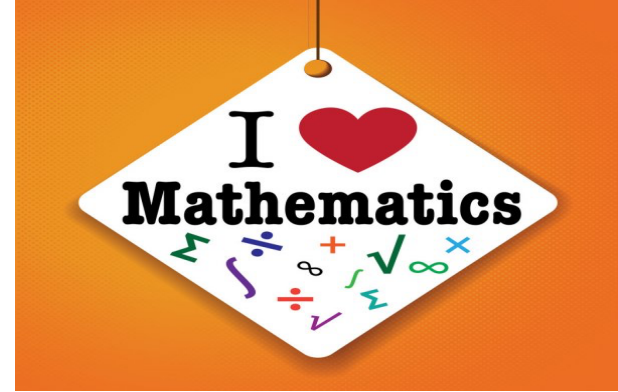
- 6 Annie, Tommy and Kim are making flags for the school fair.

Annie has completed $3\frac{3}{4}$ flags, Tommy has completed $3\frac{2}{3}$ flags and Kim has completed $\frac{18}{5}$ flags.

Who has completed the most flags?

$\frac{18}{5} = 3\frac{3}{5}$ $\frac{3}{4} > \frac{2}{3} > \frac{3}{5}$

Annie has completed the most flags



Wednesday 13th January

Addition and subtraction of fractions

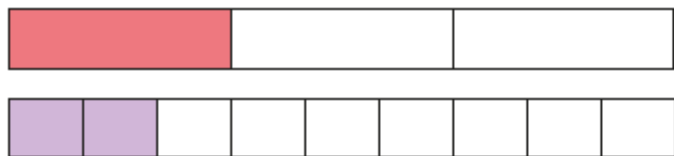
Watch the video link and answer the following questions

<https://vimeo.com/470094960>

Add and subtract fractions (1)

- 1 Eva is working out $\frac{1}{3} + \frac{2}{9}$

She uses two fraction strips.

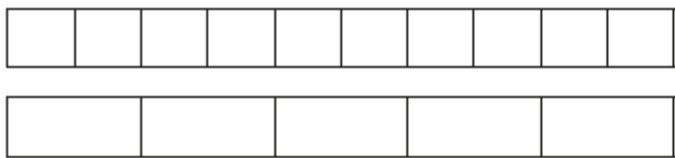


Use the fraction strips to help you complete the calculations.

$$\frac{1}{3} = \frac{\square}{9} \quad \frac{1}{3} + \frac{2}{9} = \frac{\square}{9} + \frac{2}{9} = \frac{\square}{9}$$

- 2 Complete the addition.

$$\frac{3}{10} + \frac{2}{5} = \square$$



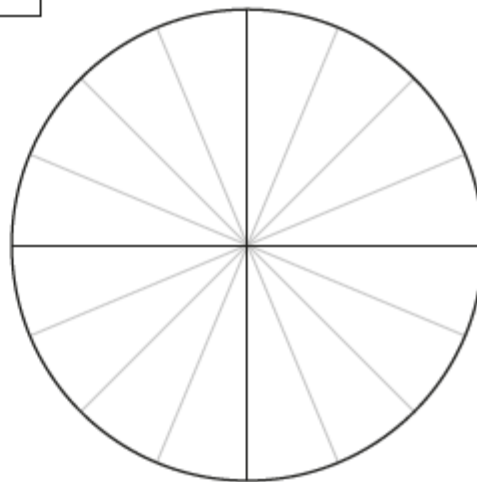
- 3 Use the bar model to complete the subtraction.

$$\frac{7}{8} - \frac{1}{4} = \square$$



- 4 Use the diagram to complete the calculation.

$$\frac{9}{16} - \frac{1}{4} = \square$$



- 5 Mo spends $\frac{3}{5}$ of his pocket money on a present for his sister.

He gives $\frac{2}{15}$ of his pocket money to charity.

What fraction of his pocket money does he have left?

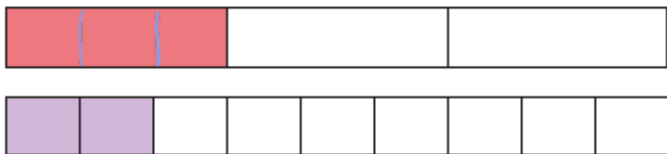
You may use the fraction strip to help you.



Add and subtract fractions (1)

- 1 Eva is working out $\frac{1}{3} + \frac{2}{9}$

She uses two fraction strips.



Use the fraction strips to help you complete the calculations.

$$\frac{1}{3} = \frac{\boxed{3}}{9} \quad \frac{1}{3} + \frac{2}{9} = \frac{\boxed{3}}{9} + \frac{2}{9} = \frac{\boxed{5}}{9}$$

- 2 Complete the addition.

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



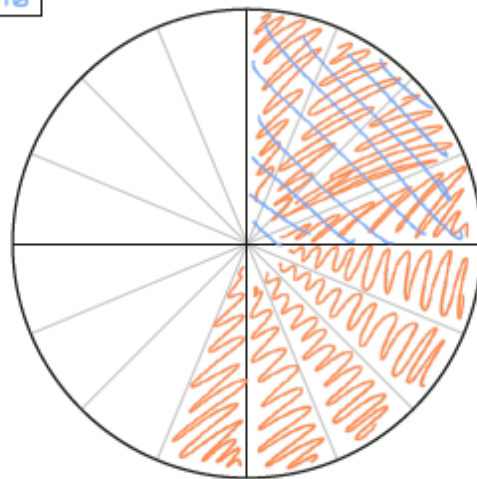
- 3 Use the bar model to complete the subtraction.

$$\frac{7}{8} - \frac{1}{4} = \frac{\boxed{5}}{8}$$



- 4 Use the diagram to complete the calculation.

$$\frac{9}{16} - \frac{1}{4} = \frac{\boxed{5}}{16}$$

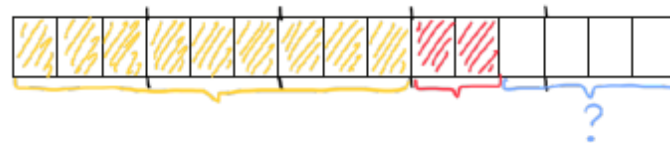


- 5 Mo spends $\frac{3}{5}$ of his pocket money on a present for his sister.

He gives $\frac{2}{15}$ of his pocket money to charity.

What fraction of his pocket money does he have left?

You may use the fraction strip to help you.

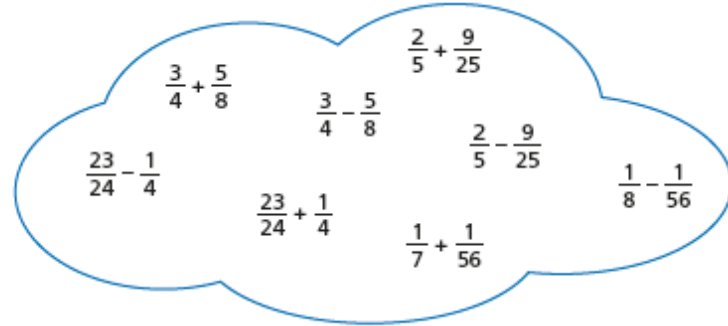


$$\frac{\boxed{4}}{15}$$



CHALLENGE QUESTIONS

- 6 Sort the calculations into the correct part of the table.



Calculations with answers less than 1	Calculations with answers greater than 1

- 7 Complete the calculations.

Give your answers in their simplest form.

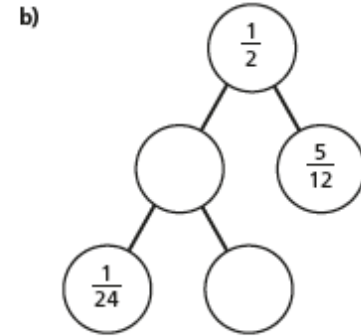
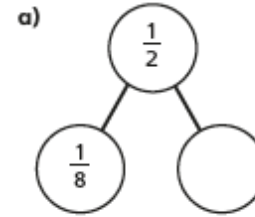
a) $\frac{9}{20} + \frac{3}{5} = \square$

c) $\frac{2}{5} + \square = \frac{17}{30}$

b) $\frac{9}{100} + \frac{7}{20} = \square$

d) $\frac{17}{50} - \square = \frac{19}{100}$

- 8 Complete the part-whole models.



- 9



A jug is filled with $\frac{9}{10}$ of a litre of juice.

$\frac{3}{50}$ of a litre of juice is poured into a glass.

$\frac{7}{100}$ of a litre of juice is poured into another glass.

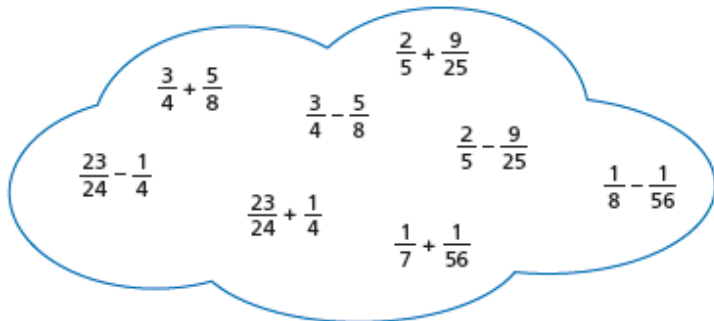
How much juice is left in the jug?

There is \square of a litre of juice left in the jug.

Talk about your method with a partner.



6 Sort the calculations into the correct part of the table.



Calculations with answers less than 1	Calculations with answers greater than 1
$\frac{23}{24} - \frac{1}{4}$ $\frac{3}{4} - \frac{5}{8}$ $\frac{2}{5} + \frac{9}{25}$ $\frac{2}{5} - \frac{9}{25}$ $\frac{1}{7} + \frac{1}{56}$ $\frac{1}{8} - \frac{1}{56}$	$\frac{3}{4} + \frac{5}{8}$ $\frac{23}{24} + \frac{1}{4}$

7 Complete the calculations.

Give your answers in their simplest form.

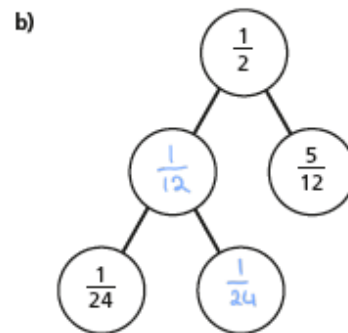
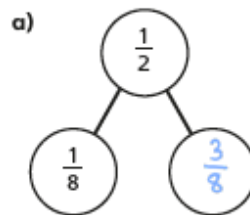
a) $\frac{9}{20} + \frac{3}{5} = \boxed{\frac{11}{20}}$

c) $\frac{2}{5} + \frac{1}{6} = \frac{17}{30}$

b) $\frac{9}{100} + \frac{7}{20} = \boxed{\frac{11}{25}}$

d) $\frac{17}{50} - \frac{3}{20} = \frac{19}{100}$

8 Complete the part-whole models.



9



A jug is filled with $\frac{9}{10}$ of a litre of juice.

$\frac{3}{50}$ of a litre of juice is poured into a glass.

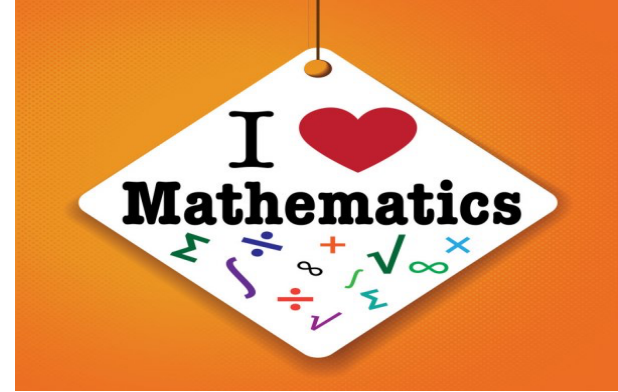
$\frac{7}{100}$ of a litre of juice is poured into another glass.

How much juice is left in the jug?

$$\frac{9}{10} = \frac{90}{100} \quad \frac{3}{50} = \frac{6}{100} \quad \frac{6}{100} + \frac{7}{100} = \frac{13}{100} \quad \frac{90}{100} - \frac{13}{100} = \frac{77}{100}$$

There is $\boxed{\frac{77}{100}}$ of a litre of juice left in the jug.

Talk about your method with a partner.



Thursday 14th January

Addition of mixed numbers

Watch the video link and answer the following questions

<https://vimeo.com/471345176>

Add mixed numbers

- 1 Teddy and Mo are adding mixed numbers.



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

Teddy

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

Mo



Whose method do you prefer? _____

Talk about it with a partner.



- 2 Complete the calculations.

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

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

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

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

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

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

- 3



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

How can Ron improve his answer?

- 4

Complete the additions.

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

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

Add mixed numbers

- 1 Teddy and Mo are adding mixed numbers.



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

Teddy

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

Mo



Whose method do you prefer? various

Talk about it with a partner.

- 2 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) $1\frac{3}{4} + 3\frac{3}{20} = 4\frac{9}{20}$

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

3



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

How can Ron improve his answer?

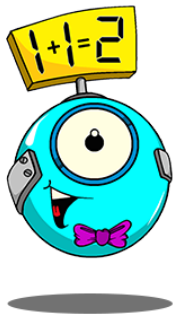
$$\frac{13}{10} = 1\frac{3}{10} \quad \text{so} \quad 3\frac{13}{10} = 4\frac{3}{10}$$

4

Complete the additions.

a) $2\frac{3}{4} + 3\frac{5}{12} = 6\frac{1}{6}$

b) $3\frac{2}{3} + 2\frac{7}{12} = 6\frac{1}{6}$



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

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

5 A blue ribbon is $2\frac{4}{9}$ metres long.A yellow ribbon is $3\frac{2}{3}$ metres long.

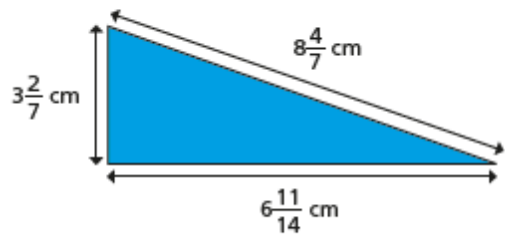
a) What is the total length of the blue and yellow ribbon?

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

How long is the red ribbon?

 m

6 Calculate the perimeter of the triangle.

 cm

CHALLENGE QUESTIONS

7 Complete the calculation in three different ways.

$$\square \frac{\square}{5} + \square \frac{\square}{15} = 6 + \frac{11}{15} = \square$$

$$\square \frac{\square}{5} + \square \frac{\square}{15} = 6 + \frac{11}{15} = \square$$

$$\square \frac{\square}{5} + \square \frac{\square}{15} = 6 + \frac{11}{15} = \square$$

Compare answers with a partner.

8 Here are some number cards.

$3\frac{1}{6}$	$2\frac{11}{12}$	$2\frac{5}{6}$	$3\frac{5}{6}$	$4\frac{1}{12}$	$4\frac{1}{3}$
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a) What is the greatest total you can make with two cards?

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

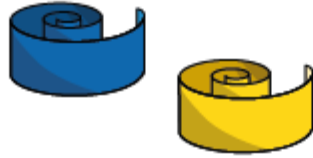




$$c) 5\frac{1}{6} + 3\frac{11}{12} = \boxed{9\frac{1}{2}}$$

$$d) 6\frac{7}{15} + 3\frac{3}{5} = \boxed{10\frac{1}{3}}$$

- 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?

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

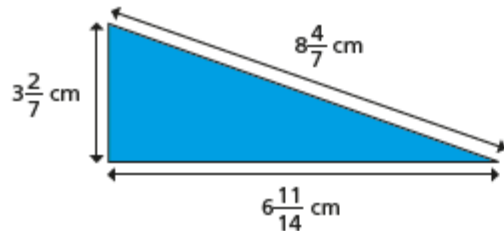
- b) A red ribbon is $1\frac{5}{18}$ metres longer than the yellow ribbon.

How long is the red ribbon?



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

- 6 Calculate the perimeter of the triangle.



$$\boxed{18\frac{9}{14}} \text{ cm}$$

- 7 Complete the calculation in three different ways.

e.g.

$$\boxed{1}\frac{\boxed{1}}{5} + \boxed{5}\frac{\boxed{8}}{15} = 6 + \frac{11}{15} = \boxed{6\frac{11}{15}}$$

$$\boxed{3}\frac{\boxed{2}}{5} + \boxed{3}\frac{\boxed{5}}{15} = 6 + \frac{11}{15} = \boxed{6\frac{11}{15}}$$

$$\boxed{1}\frac{\boxed{4}}{5} + \boxed{4}\frac{\boxed{14}}{15} = 6 + \frac{11}{15} = \boxed{6\frac{11}{15}}$$

Compare answers with a partner.

- 8 Here are some number cards.



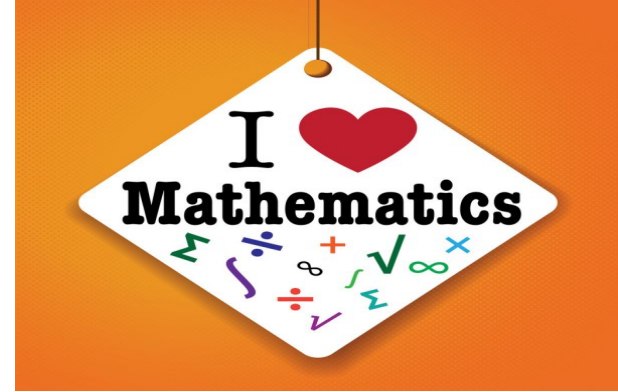
- a) What is the greatest total you can make with two cards?

$$\boxed{8\frac{5}{12}}$$

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

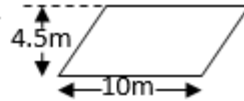

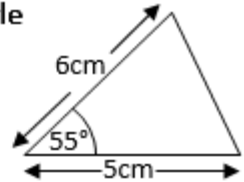
$$\boxed{5\frac{3}{4}}$$

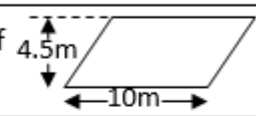
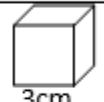
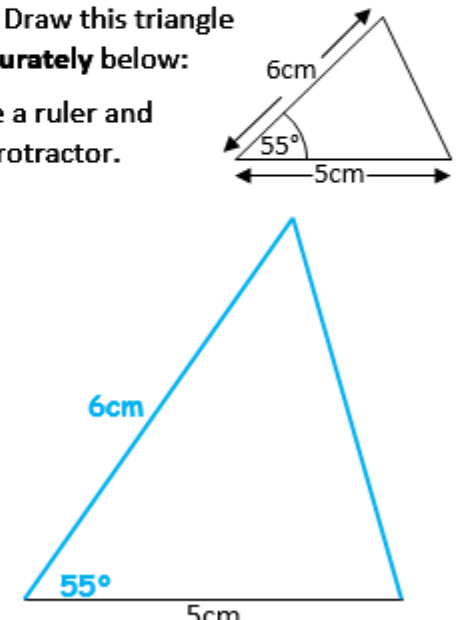




Friday 15th January

Complete the Skills Check

A: Place Value, Add, Subtract, Multiply and Divide		B: Fractions, Ratio, Proportion and Algebra		C: Measure and Geometry			
1. Write nine million, seven thousand, three hundred and eight in digits.	6:1	11. Which is the largest fraction? $\frac{2}{3}$, $\frac{5}{6}$ or $\frac{7}{12}$	6:7	21. How many miles are approximately equal to 4 kilometres ?	6:18		
2. What is the value of the 8 in this number? 1,384,721	6:1	12. $\frac{5}{6} + \frac{1}{9} =$	6:8	22. Give the length and width of two rectangles that have an area of 20m ² .	6:20		
3. Round 7.186 to 2 decimal places.	6:1	13. Simplify <u>your</u> answer. $\frac{2}{3} \times \frac{1}{2} =$	6:9	24. Find the area of <u>this parallelogram</u> . 	6:21		
4. What is the largest possible crowd? Attendance: 25,000 (to the nearest thousand)	6:2	14. 0.5738 x 1000	6:10	24. Calculate the volume of a cube with a 3cm side length. 	6:22		
5. 1,482 x 15	6:3	15. 2.15 x 3	6:11	25. Draw this triangle accurately below: Use a ruler and a protractor. 	6:23		
6. 392 ÷ 14	6:3	16. Write this fraction as a decimal and a percentage . $\frac{1}{5}$	6:12				
7. Which is a common multiple of 4 and 6? 2 3 8 12 18	6:4	17. Find 35% of 180.	6:13				
8. Which factor of 25 is also a prime number ?	6:4	18. In a class of 25 pupils, $\frac{3}{5}$ are boys. How many girls are there?	6:14				
9. 68 - 24 ÷ 2	6:5	19. How much will a 5 minute call cost? Call charge: 30p + 7p per minute.	6:15				
10. I have £10. I buy 2 coffees at £2.89 each. How much do I have left?	6:6	20. What is the 10th term of this sequence? 3, 7, 11, 15, 19, ...	6:16				
Total (A)		Total (B)				Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)			G (20-25)	

A: Place Value, Add, Subtract, Multiply and Divide		B: Fractions, Ratio, Proportion and Algebra		C: Measure and Geometry	
1. Write nine million, seven thousand, three hundred and eight in digits.	6:1 9,700,308	11. Which is the largest fraction? $\frac{2}{3}$, $\frac{5}{6}$ or $\frac{7}{12}$	6:7 $\frac{5}{6}$	21. How many miles are approximately equal to 4 kilometres ?	6:18 2.5
2. What is the value of the 8 in this number? 1,384,721	6:1 80,000	12. $\frac{5}{6} + \frac{1}{9} =$	6:8 $\frac{17}{18}$	22. Give the length and width of two rectangles that have an area of 20m ² .	6:20 1x20, 2x10, 4x5
3. Round 7.186 to 2 decimal places.	6:1 7.19	13. Simplify <u>your answer</u> . $\frac{2}{3} \times \frac{1}{2} =$	6:9 $\frac{1}{3}$	23. Find the area of <u>this parallelogram</u> . 	6:21 45m²
4. What is the largest possible crowd? Attendance: 25,000 (to the nearest thousand)	6:2 25,499	14. 0.5738 x 1000	6:10 573.8	24. Calculate the volume of a cube with a 3cm side length. 	6:22 27cm³
5. 1,482 x 15	6:3 22,230	15. 2.15 x 3	6:11 6.45	25. Draw this triangle accurately below: Use a ruler and a protractor. 	6:23 Shape drawn with 55° (+/- 2°) angle and 6cm (+/- 2mm) side length
6. 392 ÷ 14	6:3 28	16. Write this fraction as a decimal and a percentage . $\frac{1}{5}$	6:12 0.2, 20%		
7. Which is a common multiple of 4 and 6? 2 3 8 12 18	6:4 12	17. Find 35% of 180.	6:13 63		
8. Which factor of 25 is also a prime number ?	6:4 5	18. In a class of 25 pupils, $\frac{3}{5}$ are boys. How many girls are there?	6:14 10		
9. 68 - 24 ÷ 2	6:5 56	19. How much will a 5 minute call cost? Call charge: 30p + 7p per minute.	6:15 65p		
10. I have £10. I buy 2 coffees at £2.89 each. How much do I have left?	6:6 £4.22	20. What is the 10th term of this sequence? 3, 7, 11, 15, 19, ...	6:16 39		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)		Y (10-19)	
				G (20-25)	