

L.O. To solve problems
involving fractions of
amounts

Starter:

Find 1,000 more and 1,000 less for the following numbers:

$\leftarrow 5,000 \rightarrow$

$\leftarrow 3,345 \rightarrow$

$\leftarrow 9,999 \rightarrow$

$\leftarrow 10,999 \rightarrow$

$\leftarrow 13,009 \rightarrow$

Starter:

Find 1,000 more and 1,000 less for the following numbers:

$$4000 \leftarrow 5,000 \rightarrow 6000$$

$$2345 \leftarrow 3,345 \rightarrow 4345$$

$$8,999 \leftarrow 9,999 \rightarrow 10,999$$

$$9,999 \leftarrow 10,999 \rightarrow 11,999$$

$$12,009 \leftarrow 13,009 \rightarrow 14,009$$

Answer

Problem of the Day

Write in the missing number.



$$8.5 + 14.7 = 10.2 +$$

Problem of the Day

Write in the missing number.

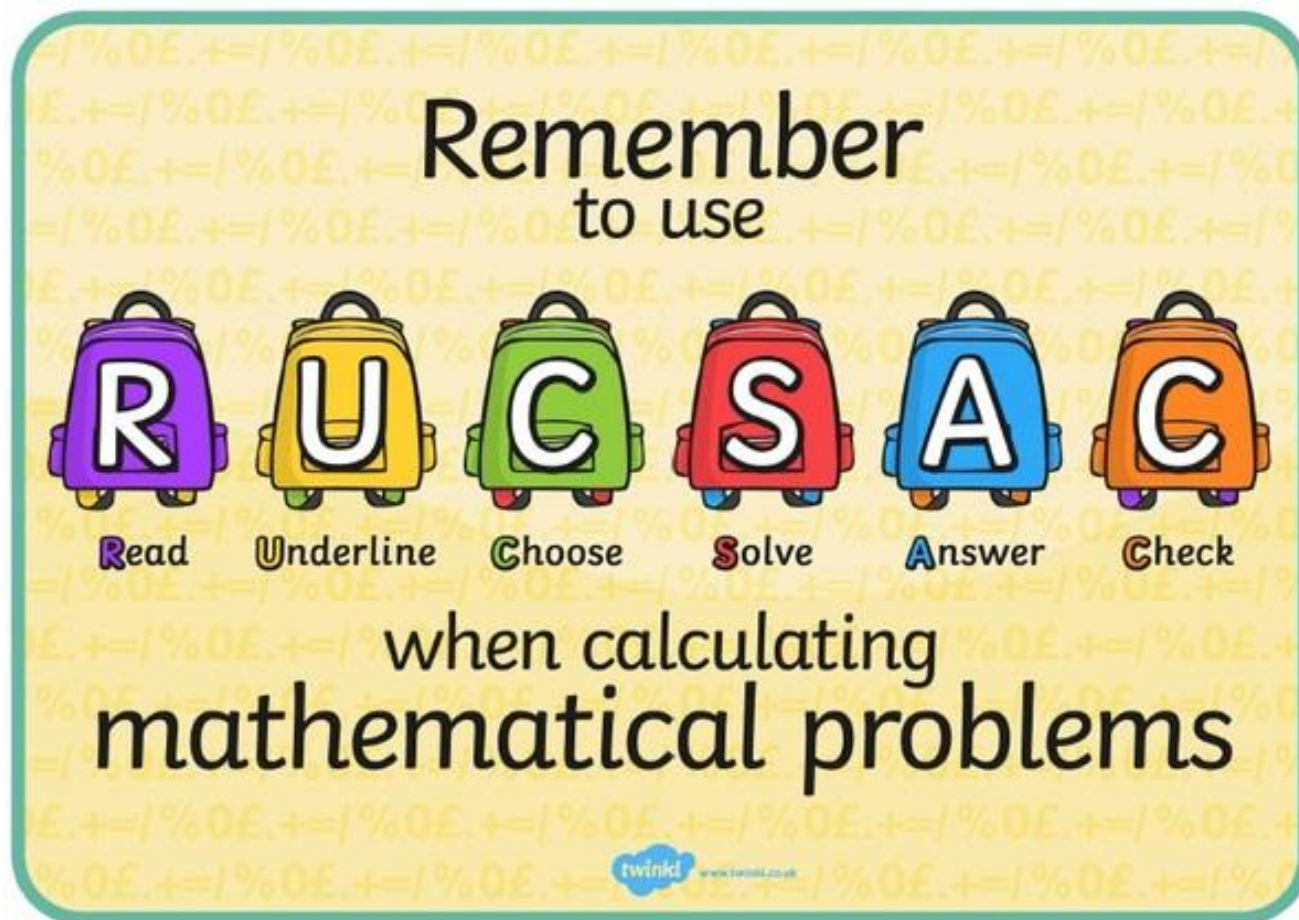


$$8.5 + 14.7 = 10.2 +$$

13.00

Answer

What will we use to solve these problems?



- 
- ▶ There are 30 children in a class. $\frac{3}{5}$ of the children are girls.
 - ▶ How many girls are there in the class?

Answer

- There are 30 children in a class. $\frac{3}{5}$ of the children are girls.

Answer

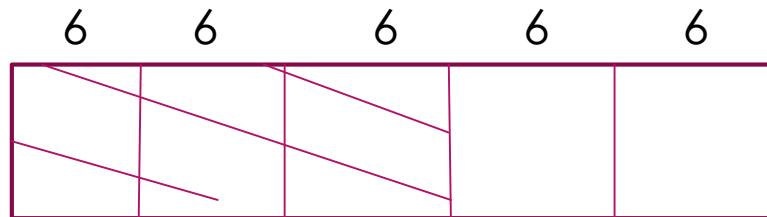
- How many girls are there in the class?


$\frac{3}{5}$ of 30

30 divided by 5 = 6

$6 \times 3 = \underline{18 \text{ girls}}$

There are 18 girls in the class



- 
- ▶ Alice has £72. She spends $\frac{3}{8}$ of the money on clothes.
 - ▶ How much money does she have left?

Answer

- ▶ Alice has £72. She spends $\frac{3}{8}$ of the money on clothes.

Answer

- ▶ How much money does she have left?

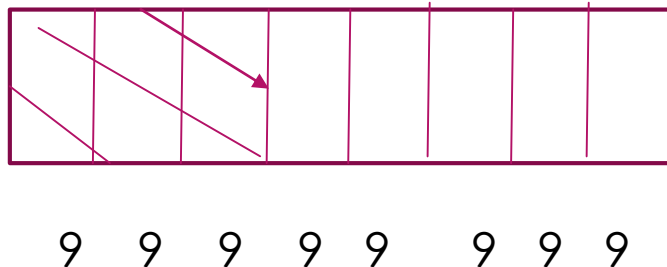
72 divided by 8 = 9


$9 \times 3 = 27$

She spends £27

Money left = $72 - 27$

Therefore she has £45 left




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- ▶ 4/10 of the 120 felt tips in the class have lost their lids and 2/12 are black.
 - ▶ How many felt tips have lost their lids?
 - ▶ How many are black that have lost lids?

Answer

- ▶ 4/10 of the 120 felt tips in the class have lost their lids and 2/12 are black.
- ▶ How many felt tips have lost their lids? How many are black?
- ▶ 120 divided by 10 = $12 \times 4 = \underline{48}$ felt tips have lost their lids
- ▶ Black = 2/12 of 48 = $4 \times 2 = \underline{8}$ felt tips are black

Answer

- 
- ▶ There are 40 people on a train. $\frac{1}{8}$ get off at the 1st stop. $\frac{2}{5}$ get off at the 2nd stop.
 - a) How many people got off at the 1st stop?
 - b) How many people got off at the 2nd stop?
 - c) How many people are still on the train?

Answer

Answer

- There are 40 people on a train. $\frac{1}{8}$ get off at the 1st stop. $\frac{2}{5}$ get off at the 2nd stop.

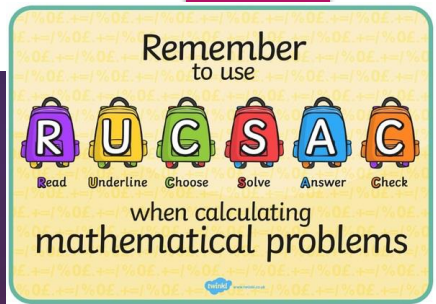
- a) How many people got off at the 1st stop?
- b) How many people got off at the 2nd stop?
- c) How many people are still on the train?

a) 1st stop $\frac{1}{8}$ of 40 = 5 people

b) 2nd stop $\frac{2}{5}$ of 40 = 40 divided by 5 = $8 \times 2 =$ 16 people

c) Still on train $16 + 5 = 21$
 $40 - 21 =$ 19 people

Task :Solve the word problems



- 1) 27 of the lemurs at the safari park are ring-tailed lemurs. $\frac{3}{9}$ of those make up one family. How many of the ring-tailed lemurs are related?

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2)

- A group of 60 children went on a school trip to the safari park. $\frac{7}{10}$ of the children had never been there before. For how many children was this their first visit?

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Answers

Remember
to use



Answer

3. 27 of the lemurs at the safari park are ring-tailed lemurs. $\frac{3}{9}$ of those make up one family. How many of the ring-tailed lemurs are related?

3	3	3	3	3	3	3	3	3
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$\frac{3}{9}$ of 27 $3 \times 3 = 9$ or $3 + 3 + 3 = 9$ 9 of the ring-tailed lemurs are related.

4. A group of 60 children went on a school trip to the safari park. $\frac{7}{10}$ of the children had never been there before. For how many children was this their first visit?

6	6	6	6	6	6	6	6	6	6
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$\frac{7}{10}$ of 60 $6 \times 7 = 42$ or $6 + 6 + 6 + 6 + 6 + 6 + 6 = 42$ 42 of the children were on their first visit to the safari park

TASK continued

- ▶ 3) 27 of the lemurs at the safari park are ring-tailed lemurs. $\frac{3}{9}$ of those make up one family. How many of the ring-tailed lemurs are related?
- ▶ 4) There are 2 species of flamingos living in the safari park, Caribbean and Chilean. Of the 72 flamingos, $\frac{4}{9}$ of them are Caribbean, which are the brightest pink of all flamingos. How many Caribbean flamingos does the safari park have?

Answer

- ▶ 3) $\frac{3}{9}$ of 27 $3 \times 3 = 9$ or $3 + 3 + 3 = 9$ of the ring-tailed lemurs are related.
- ▶ 4) $\frac{4}{9}$ of 72 = 32 flamingos

Challenge

- 5 Jane watched a film that was 1 hour long. $\frac{5}{6}$ of the way through the film, the doorbell rang. She paused the film to answer the door and it was the postman with a parcel.
- How many minutes of the film had she watched before the postman arrived?
 - How many minutes of the film did she have left to watch?
- 6 A cake maker is icing a wedding cake that needs three different sized tiers. The icing weighs 2000g. He uses $\frac{6}{10}$ of the icing for the bottom tier, $\frac{3}{10}$ of the icing for the middle tier and $\frac{1}{10}$ of the icing for the top tier.
- What is the weight of icing in the bottom tier?
 - What is the weight of icing in the middle tier?
 - What is the weight of icing in the top tier?

Challenge

- 5 Jane watched a film that was 1 hour long. $\frac{5}{6}$ of the way through the film, the doorbell rang. She paused the film to answer the door and it was the postman with a parcel.
- a. How many minutes of the film had she watched before the postman arrived? 50 minutes
 - b. How many minutes of the film did she have left to watch? 10 minutes
- 6 A cake maker is icing a wedding cake that needs three different sized tiers. The icing weighs 2000g. He uses $\frac{6}{10}$ of the icing for the bottom tier, $\frac{3}{10}$ of the icing for the middle tier and $\frac{1}{10}$ of the icing for the top tier.
- a. What is the weight of icing in the bottom tier? 1200g
 - b. What is the weight of icing in the middle tier? 600g
 - c. What is the weight of icing in the top tier? $2000 - (1200 + 600) = 200\text{g}$



Answer

Plenary



The school kitchen needs to buy carrots for lunch.

A large bag has 200 carrots and a medium bag has $\frac{3}{5}$ of a large bag.

Mrs Rose says,

I need 150 carrots so I will have to buy a large bag.



Is Mrs Rose correct?
Explain your reasoning.