

Addition and Subtraction



A Problem to Solve

Alfie has a two-step calculation. He needs to write a word problem for which the calculation provides the answer.

$$487 + 1026 = 1513, 1513 - 876 = 637$$



Write your own word problem.

Share your word problem with a partner.
Can you improve yours?

Write a two-step calculation for your partner to create a word problem for.

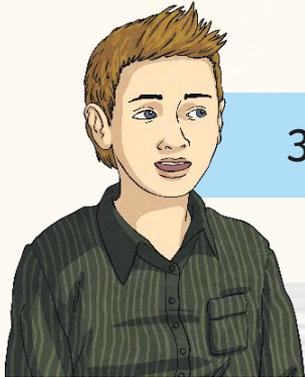
Which Order?

Fatima, Alfie and Laura are all finding the total of $340 + 271 + 160$.
Here are the methods they used:

$$340 + 271 = 611, 611 + 160 = 771$$



$$340 + 160 = 500, 500 + 271 = 771$$



$$34 + 27 + 16 = 77,$$
$$\text{so } 340 + 270 + 160 = 770,$$
$$\text{so } 340 + 271 + 160 = 771$$

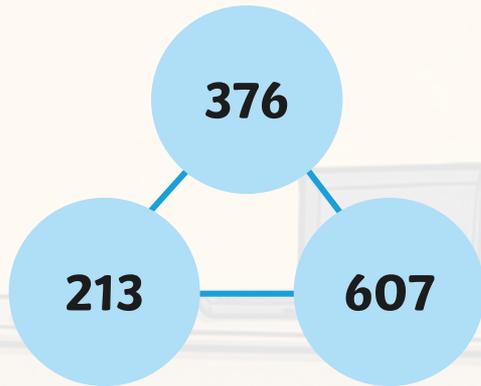


Discuss each method with a partner and decide which ones you might use. Could you use a different method altogether?

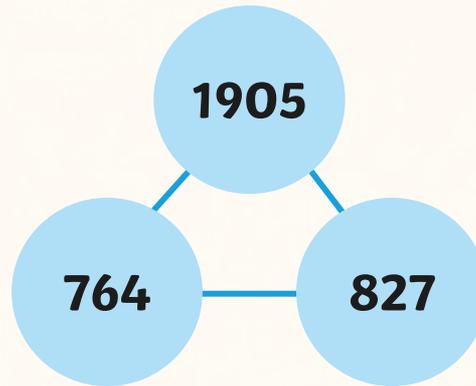
Triangles

Fatima, Alfie and Laura each make a number triangle. For each, using addition and subtraction, find the largest and smallest number that can be made using each number.

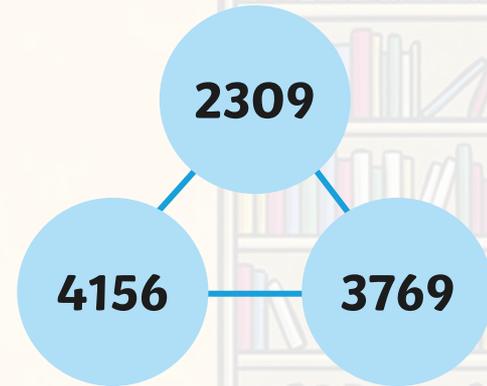
You can only use each number once and your answer must be greater than 0.



Fatima



Alfie

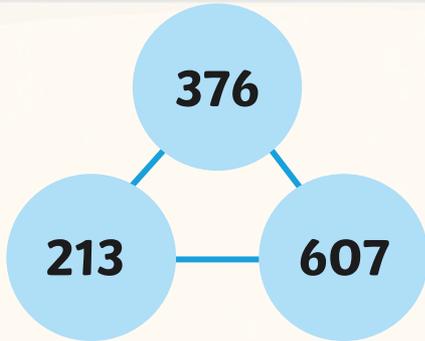


Laura

Compare your answers with a partner and suggest any rules to finding the largest and smallest numbers.



Triangles Answers



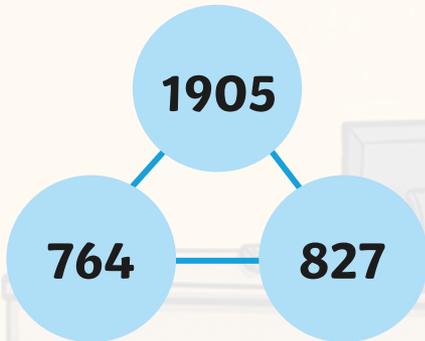
Fatima:

$$376 + 213 + 607 = 1196;$$

$$376 + 213 = 589,$$

$$607 - 589 = 18$$

The largest is found by adding the 3 numbers.



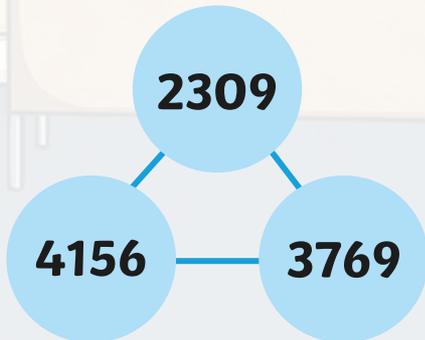
Alfie:

$$1905 + 764 + 827 = 3496;$$

$$764 + 827 = 1591,$$

$$1905 - 1591 = 314$$

The smallest is the difference between the largest and the sum of the other 2 numbers.



Laura:

$$2309 + 4156 + 3769 = 10,234;$$

$$2309 + 3769 = 6078,$$

$$6078 - 4156 = 1922$$



What's Wrong?

Fatima is working on this word problem:

On one day, a cinema has 4012 adult, 367 student and 1786 child visitors. 1276 of the visitors have cinema cards so do not pay for their tickets. How many tickets were sold on that day?

Fatima uses the following calculations:

$1786 - 1276 = 510$, $4012 + 367 + 510 = 4889$
4889 tickets were sold.



What is wrong with Fatima's answer?

Her answer is correct, but her calculations assume that all the visitors with cinema cards were children.

Discuss which method you would have used.

Share Equally

Laura, Fatima and Alfie each collect a bucket of soil. They weigh each bucket.



354g



908g



173g

They need to collect 2.1kg soil, shared as equally as possible, in the three buckets. Help them to share the soil they have collected and work out how much more they need to collect. Compare and check your answer with a partner.

The total collected was 1435g. If this was shared equally, they each collected 476.333g. Children will then decide on various methods to ensure that each child collects 700g.

1. Kieran needs to run 2500 metres. In the first ten minutes he runs 639 metres and in the second ten minutes he runs 794 metres.
How much further does he still need to run?

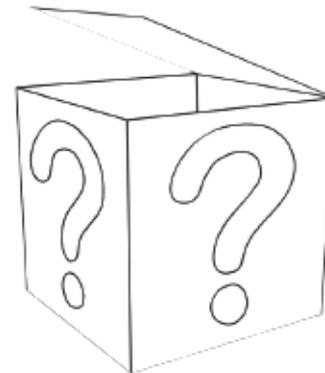
Show your workings.

2. Chocolate bar: £1.39
Pack of marshmallows: £2.47
Packet of sweets: £1.76
Special Offer: Any three items for £4.10
How much money will Len save by buying one of each item using the special offer?

Show your workings.

3. Yuan and Chan are trying to find out how many star jumps they can do in two minutes. In the first minute, Yuan completes 48 star jumps and in the second minute, he completes 56 star jumps. Chan completes 184 star jumps in two minutes.
What is the difference between the amount of star jumps completed by Yuan and Chan?

Show your workings.





4. Mrs Flood has 1938 pencils at the beginning of the school year. In term one, 348 pencils are used and in term two, 827 pencils are used.
How many pencils are left remaining to use in term three?

Show your workings.

5. Fish: £3.55
Chips: £1.29
Gravy: £0.75
Peas: £0.90
Nigel has £5. He wants to buy fish, chips and peas.
How much more money will Nigel need?

Show your workings.

6. A bottle holds two litres of freshly squeezed orange juice. Denver fills three glasses with orange juice. He puts 170 millilitres in each glass.
How much orange juice is left in the bottle?

Show your workings.
