

- 1 Mo has some sweets. He can share them between his  $x$  friends in two different ways.

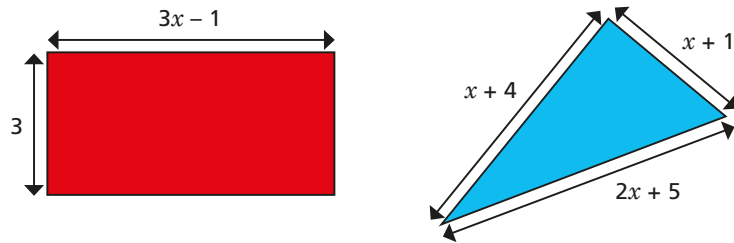
7 sweets each with 2 left over or 6 sweets each with 7 left over.

- Form and solve an equation to work out how many friends Mo is sharing his sweets between.
- How many sweets does Mo have?

- 2 The red rectangle has a greater perimeter than the blue triangle.

Measurements are in centimetres.

- Form and solve an inequality.



- If the shortest side of the triangle has a length of 5 cm, what is the area of the rectangle?

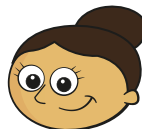
- 3 Ron, Dora and Whitney are thinking of the same number.



Ron

I am going to multiply by 5 and subtract 7

I am going to subtract 5 then multiply by 7



Dora

For what numbers will:

- Ron have a greater result than Dora?
- Ron have a smaller result than Dora?
- Ron and Dora get the same result?
- 

I am going to multiply by 5 and subtract 3



Whitney

Explain why Ron and Whitney cannot get the same result.

- 4 Nijah wants to hire a bike.

She has found two companies with different offers.

**Ride of Your Life  
Bike Hire!**  
£22 bike hire  
plus  
£1.50 per day

**Life Cycle  
Bike Hire**  
£10 bike hire  
plus  
£4 per day

- Form and solve an inequality to find the range of days Life Cycle has the better offer for.
- Explain why the two companies will never be the same price.

For what numbers will:

- a) Ron have a greater result than Dora?
- b) Ron have a smaller result than Dora?
- c) Ron and Dora get the same result?
- d)

I am going to multiply by 5 and subtract 3



Whitney

Explain why Ron and Whitney cannot get the same result.

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- a) Form and solve an inequality to find the range of days Life Cycle has the better offer for.
- b) Explain why the two companies will never be the same price.

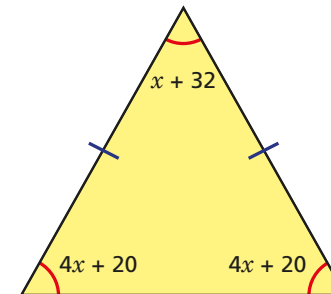
- 5 This fraction is made from two expressions.

$$\frac{3x + 5}{7x - 3}$$

For what values of  $x$  will the fraction be:

- a) greater than 1?
- b) less than 1?

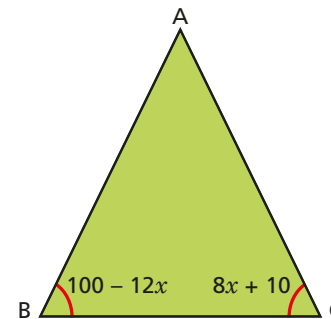
- 6 Here is a triangle.



Does the triangle contain an obtuse angle?

Explain your reasoning.

- 7 Here is a triangle.



- a) Work out the value of  $x$ .  
What assumption have you made?
- b) In fact,  $\angle ABC > \angle ACB$ .

Work out all of the possible integer values of  $x$ .