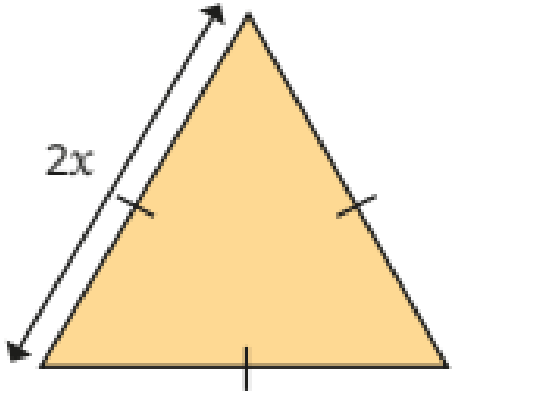
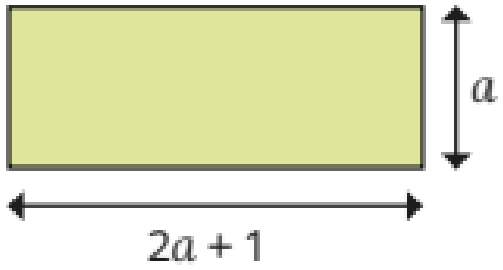
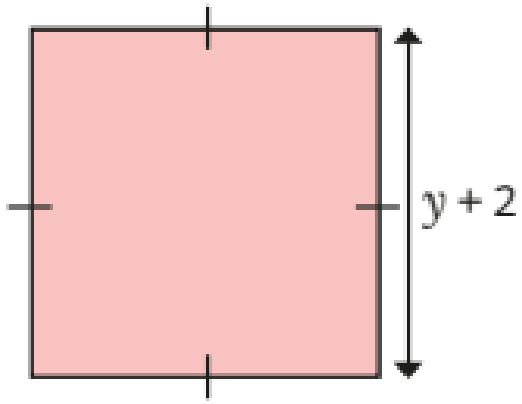
Algebra

WALT: use formulae

Write expressions for the perimeters of the shapes.

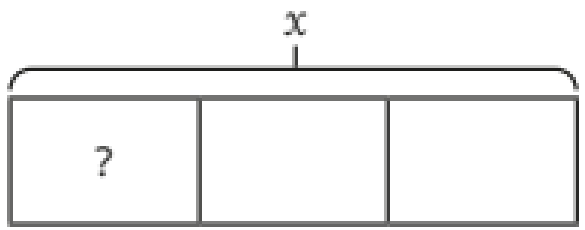


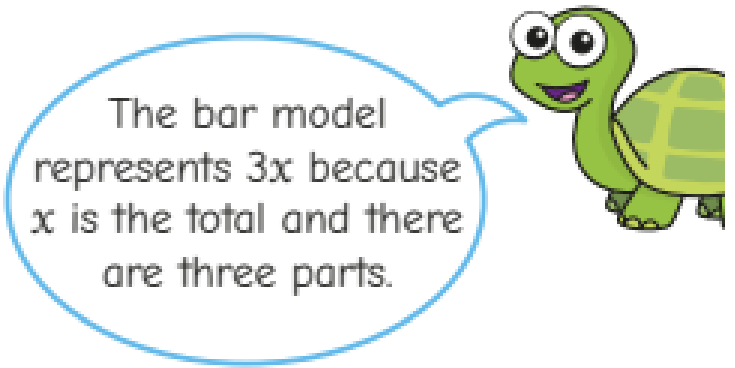




The perimeter of a rectangle is $12x$.

What could the sides of the rectangle be?





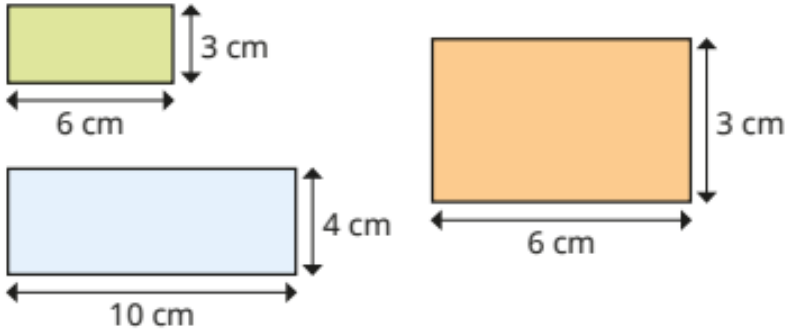
Do you agree with Tiny?

Explain your answer.

- Ron uses a formula to work out the areas of rectangles.

$$A = lw$$
When $l = 7$ and $w = 4$, $A = 7 \times 4 = 28$

  - What do the letters A, l and w represent?
  - Use the formula to find the areas of the rectangles.



- The time taken to cook a turkey is 90 minutes, plus an additional 20 minutes for every kilogram of turkey.

  This can be written as the formula $T = 90 + 20m$

  - What do the letters T and m represent?
  - Use the formula to work out the time to cook:
    - a 3 kg turkey
    - a 10 kg turkey

- Fay makes a sequence of patterns with stars and circles.

Complete the table to show the number of circles and stars in the patterns.

Number of stars	1	2	3	5		
Number of circles	2				18	30

If s = number of stars and c = number of circles, which formula describes Fay's pattern?

$s = 2 + c$	$c = s + 2$	$c = 2s$	$s = 2c$	$2s = c + 2$

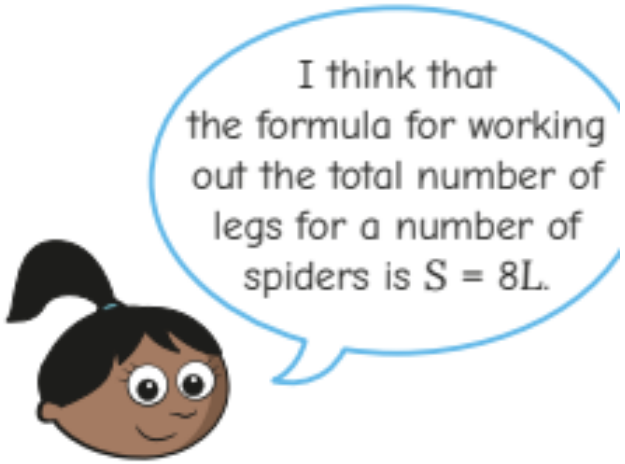
- The table shows the total number of legs on a given number of ants.

Number of ants (a)	1	2	3		
Number of legs (L)	6			30	72

Complete the table and write a formula that describes the pattern.

S = number of spiders

L = total number of legs

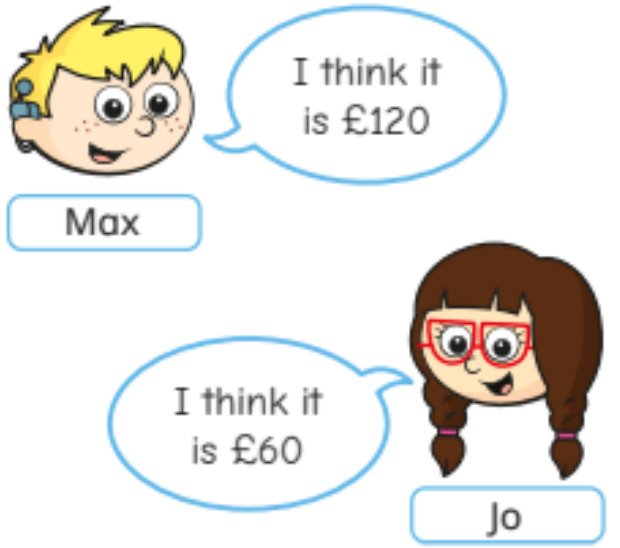


Do you agree with Sam?

Explain your answer.

Max and Jo use this formula to work out the cost in pounds (C) of four hours (h) of cleaning.

$$C = 20 + 10h$$



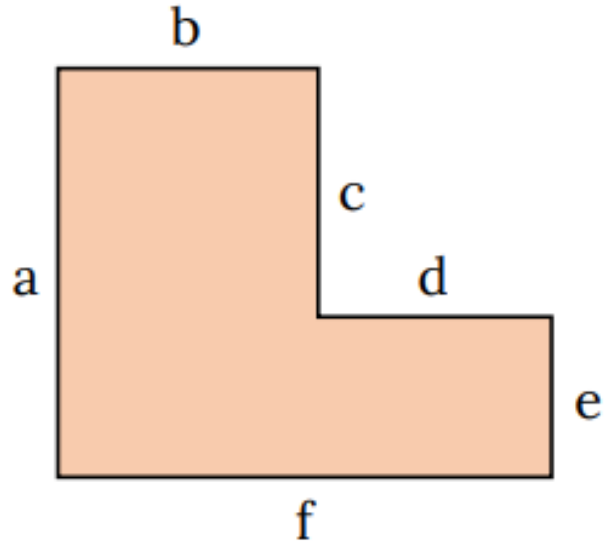
Who do you agree with?

Explain your answer.

True or False?

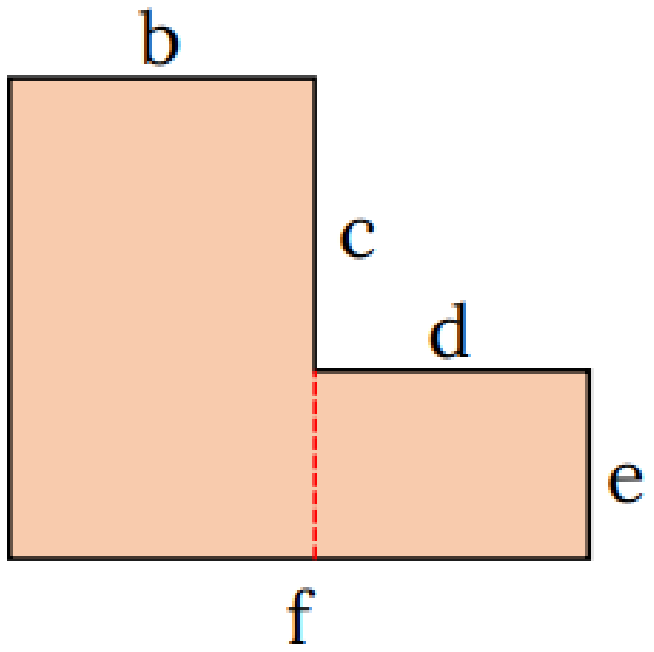
I could use any of the formulae to find the area of the rectilinear shape.

$ab + de$
$bc + ef$
$af - cd$

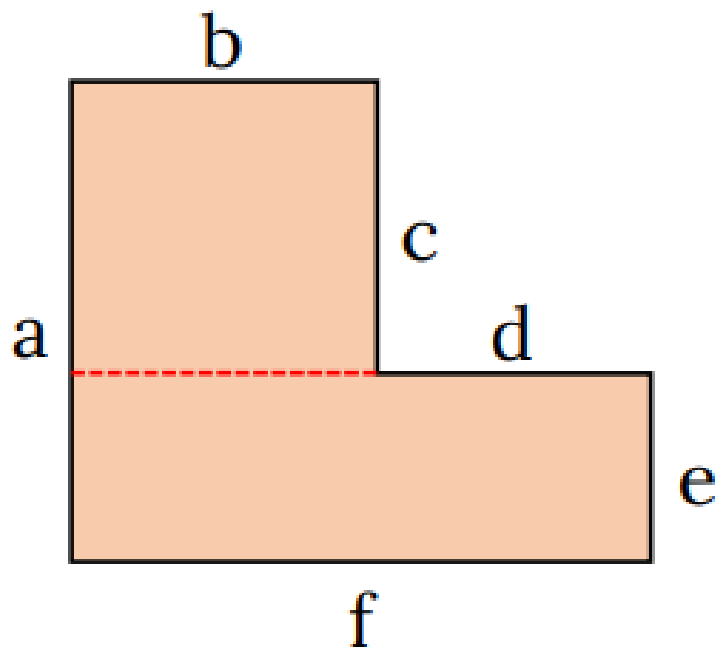


True

$ab + de$



$bc + ef$



$af - cd$