

Mathematics

Enlargement

Lesson 2 of 4

Downloadable Resource

Miss Kidd-Rossiter



Try this

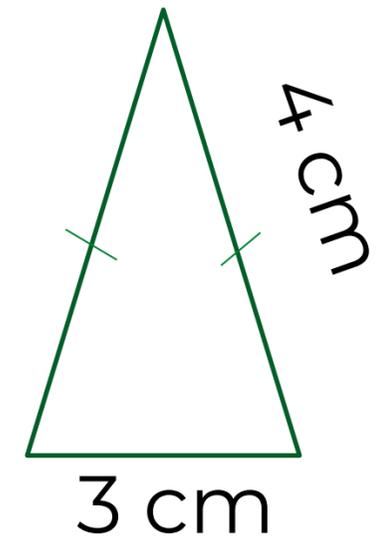
Jasmin and Zaki are drawing enlargements of the triangle shown.

All the triangles they draw have integer side lengths.



My new triangle has perimeter 33 cm.

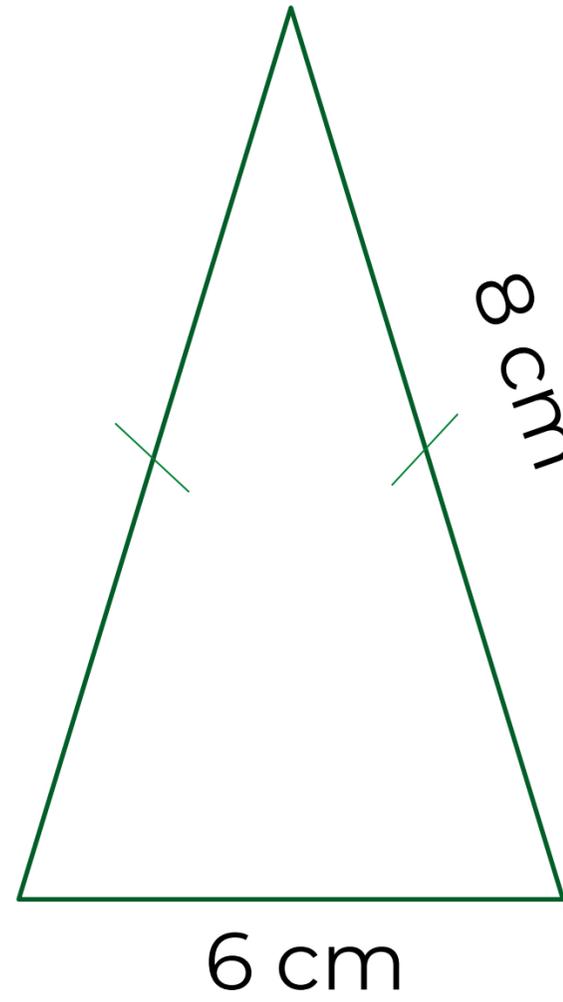
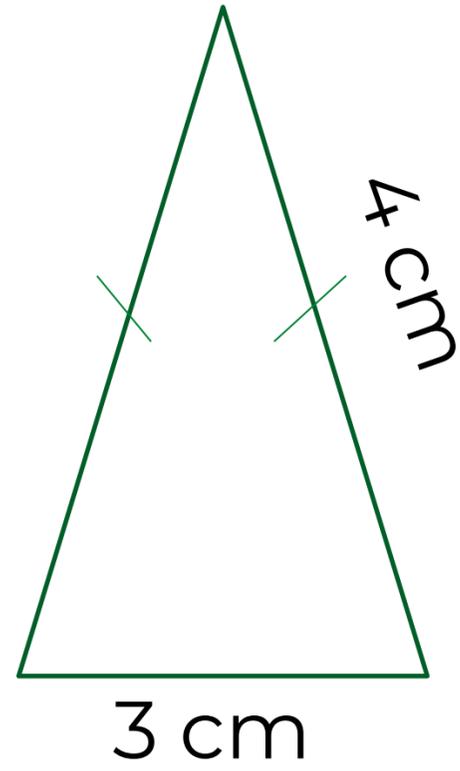
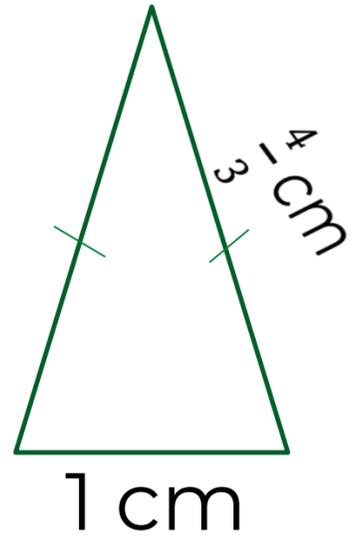
The shortest side on my new triangle is 6 cm



What are the side lengths of their triangles? How many triangles with integer side lengths can you draw with perimeter < 100 cm?

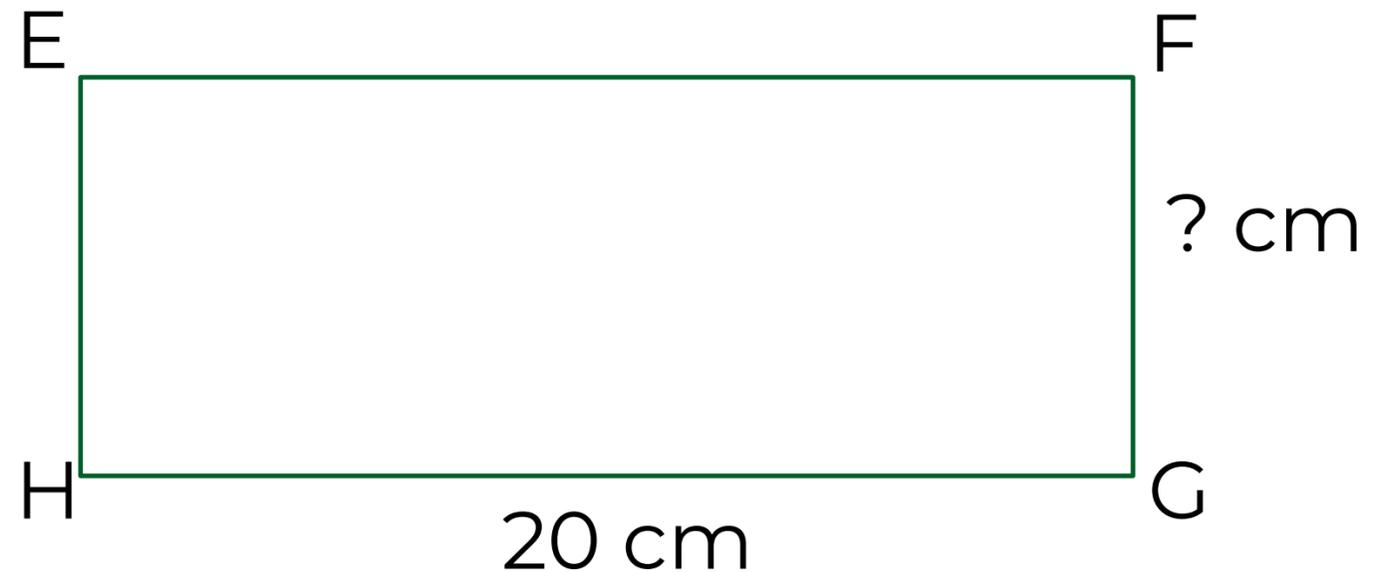
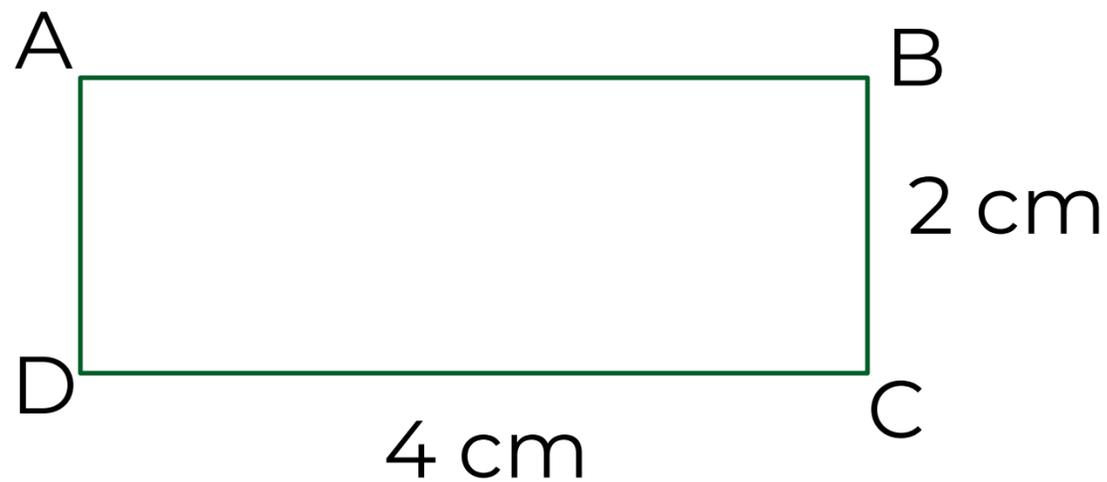


Connect



Independent task

1. For this pair of rectangles, one is an enlargement of the other.
 - a. State the ratio between the side lengths AB and EF.
 - b. State the constant of proportionality between rectangle ABCD and rectangle EFGH.
 - c. Find the length of side FG.



Independent task

2. The side lengths of pairs of triangles are shown in parts a. to d.

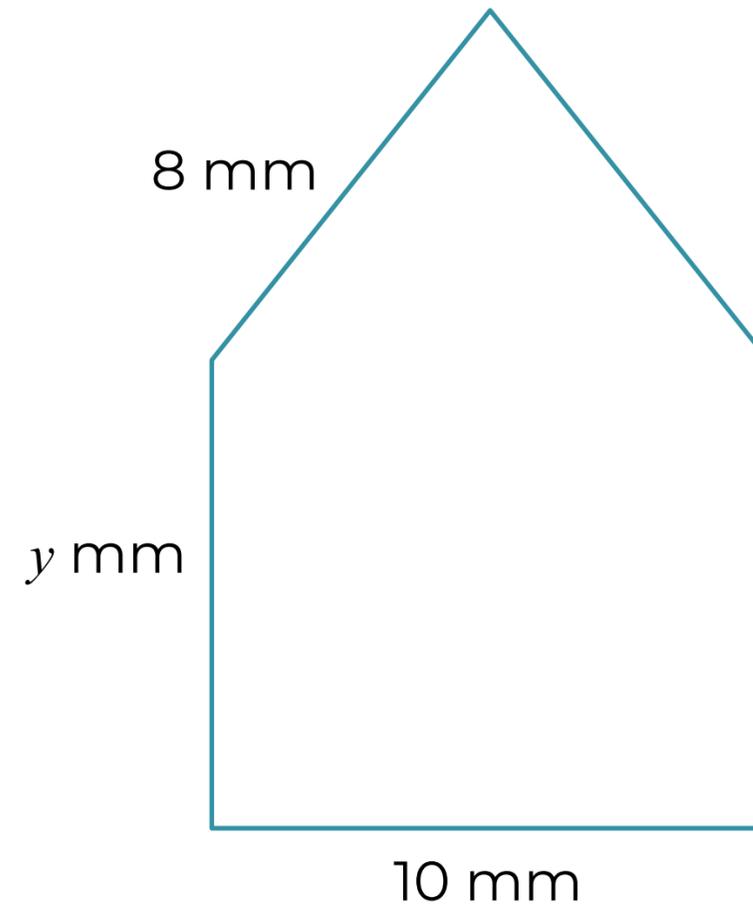
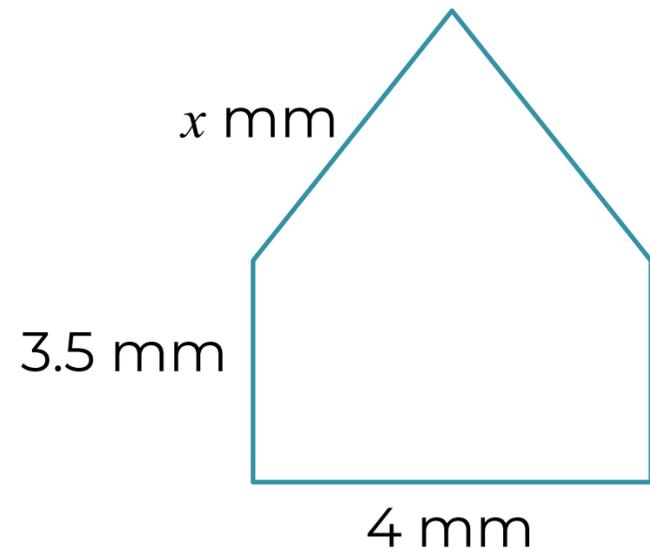
- a. Explain if the pairs of triangles are enlargements of each other or not
- b. If they are, find all the ratios within the triangles and the constant of proportionality between the two triangles

a.	Triangle ABC AB = 4cm BC = 7cm AC = 6cm	Triangle DEF DE = 16cm EF = 28cm DF = 24cm
b.	Triangle GHI GH = 3cm HI = 8cm GI = 10cm	Triangle JKL JK = 1.5cm KL = 4cm JL = 5.5cm
c.	Triangle MNP MN = 3cm NP = 11cm MP = 9cm	Triangle QRS QR = 4.5cm RS = 16.5cm QS = 13.5cm
d.	Triangle TUV TU = 8cm UV = 7cm TV = 3.5cm	Triangle XYZ XY = 20cm YZ = 17.5cm XZ = 9cm



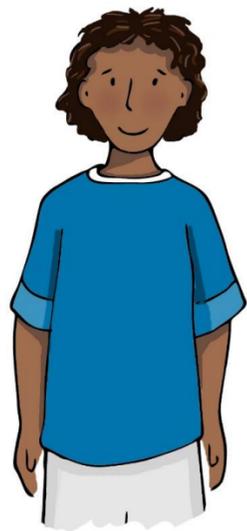
Independent task

3. For this pair of pentagons, one is an enlargement of the other.
- State the ratio between the side lengths of the bases of the pentagons.
 - State the constant of proportionality
 - Find the missing lengths.

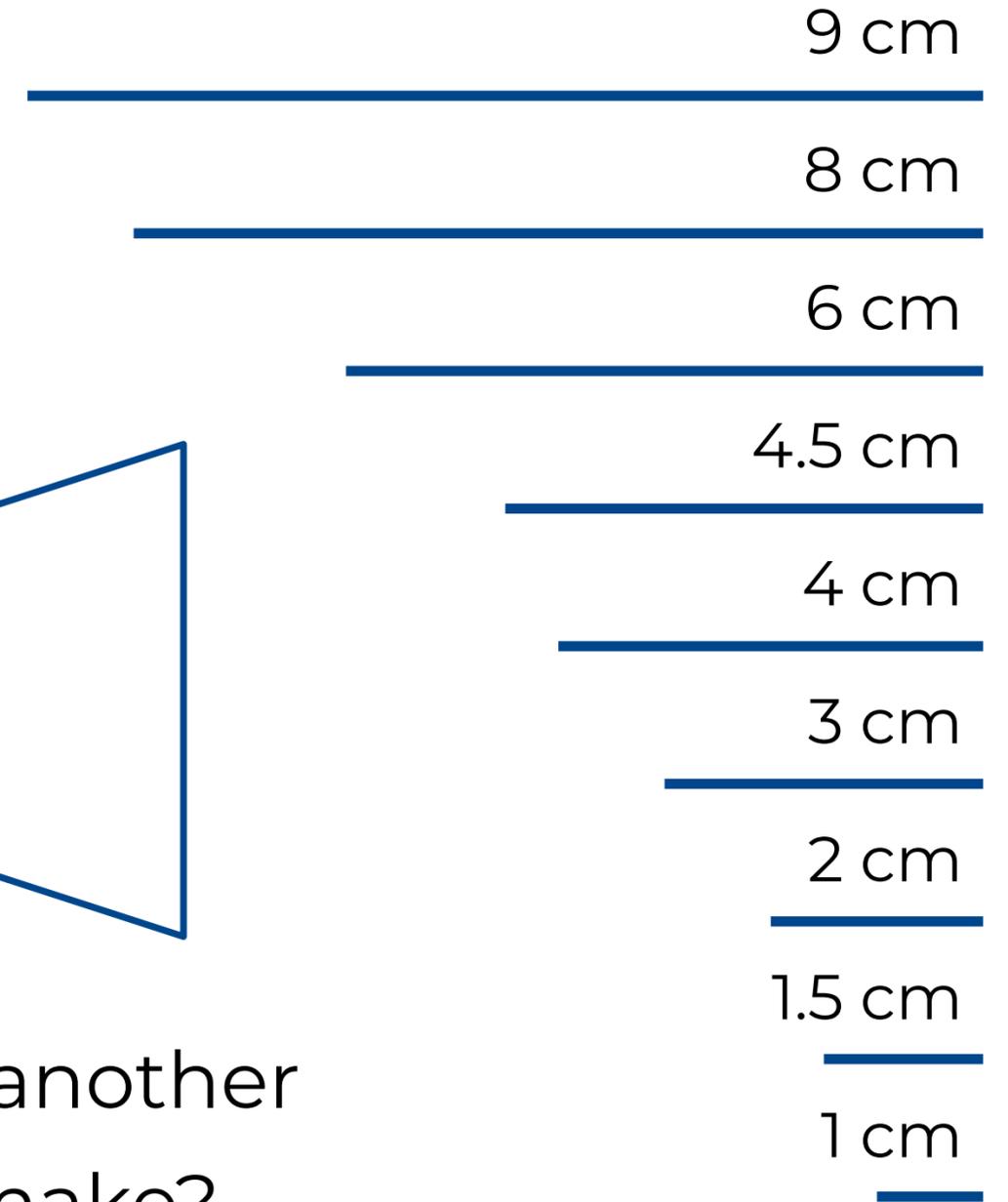
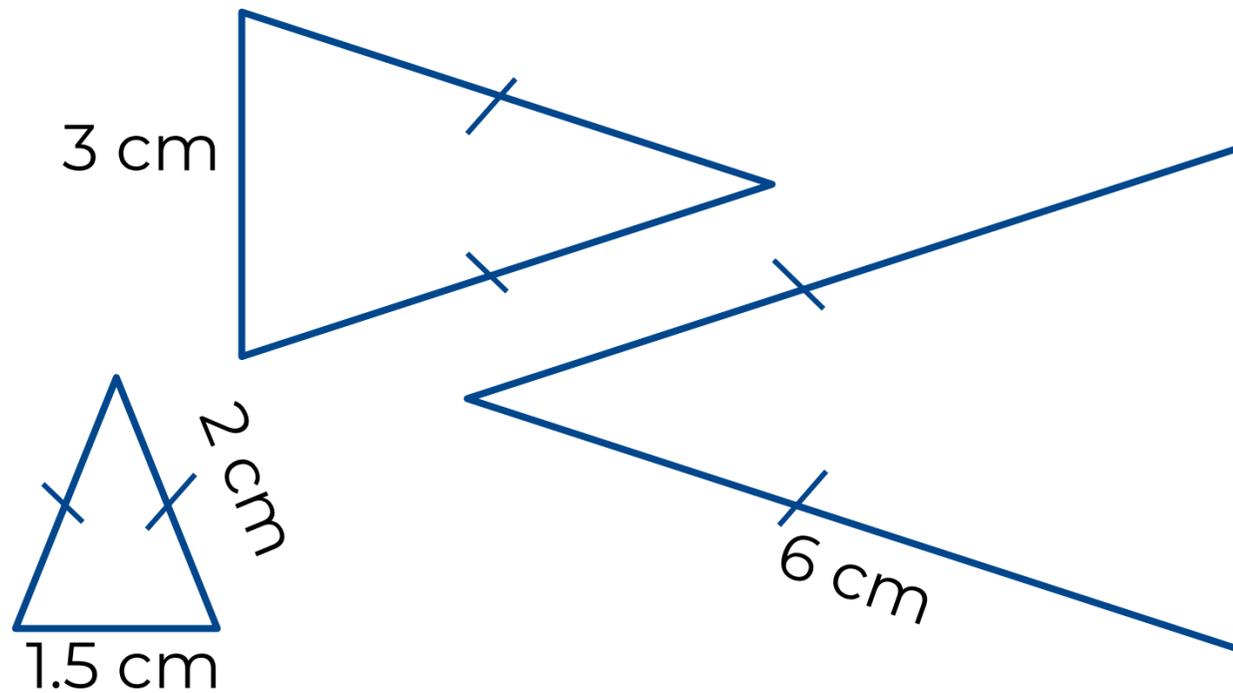


Explore

Zaki is using sticks to form shapes.
He has lots of the sets of sticks shown.



I've made a set of triangles that are enlargements of each other.



What are the missing dimensions? Could he form another enlargement? What other 'sets' of shapes can he make?

