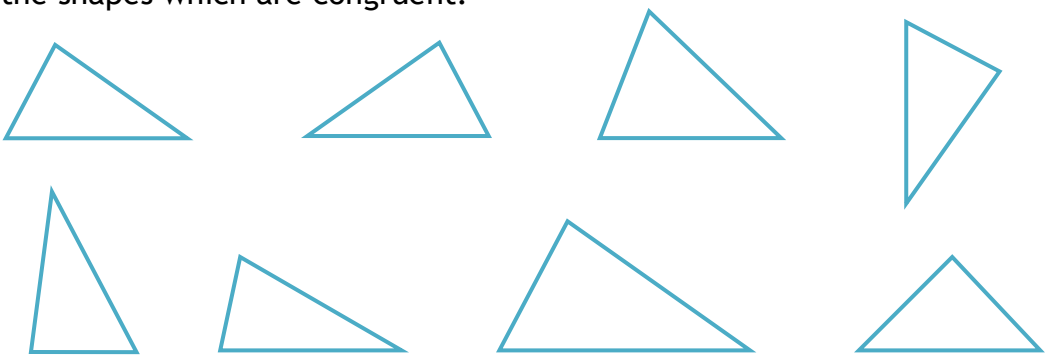
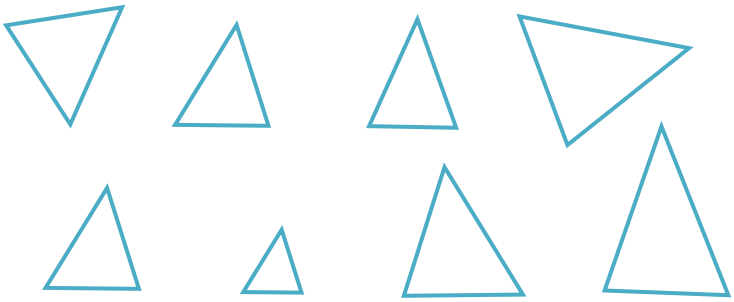
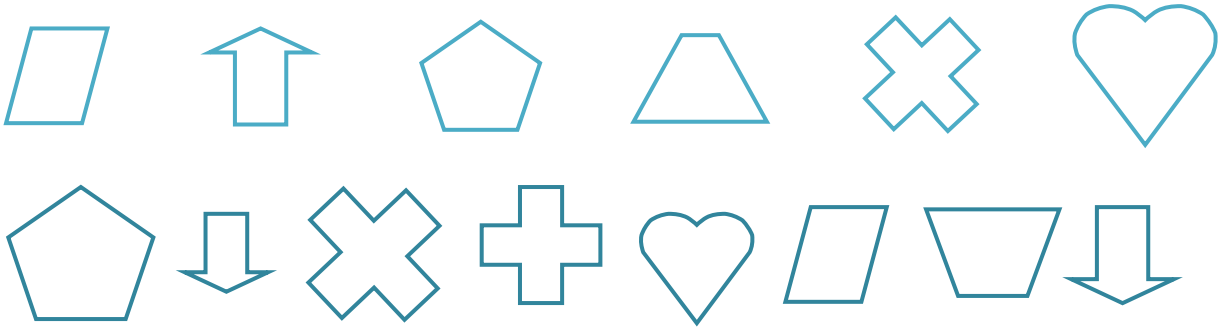
1. Tick the shapes which are congruent.



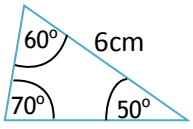
2. Tick the shapes which are similar.



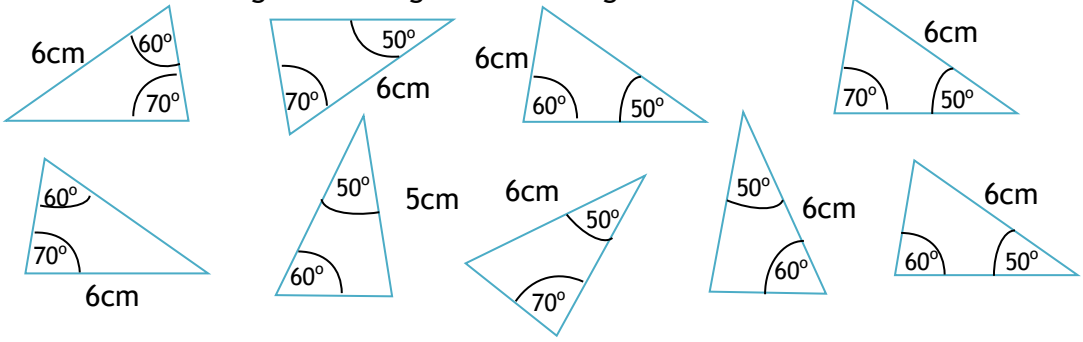
3. Which of the shapes on the bottom row are congruent to a shape on the top row? Join the pairs up.



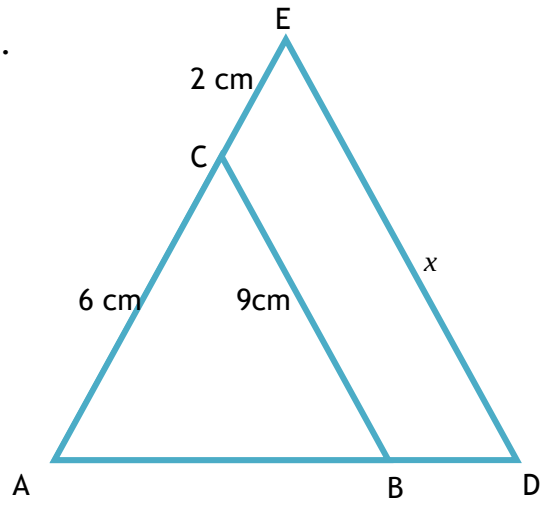
4. This is triangle A.



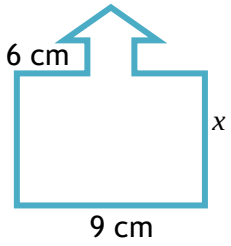
Which of these triangles are congruent to triangle A?

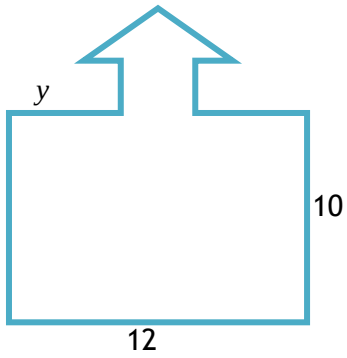


5. Triangle ABC is similar to triangle ADE.
   What is the length of side x.

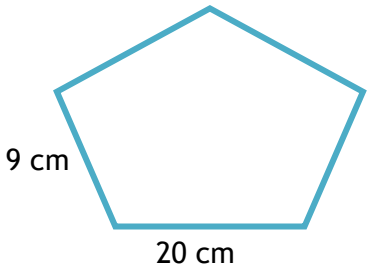


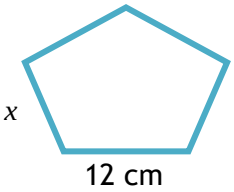
6. These 2 shapes are similar.
   Find x and y.





7. These 2 shapes are similar.
   a. What is the ratio of the larger shape to the smaller shape?





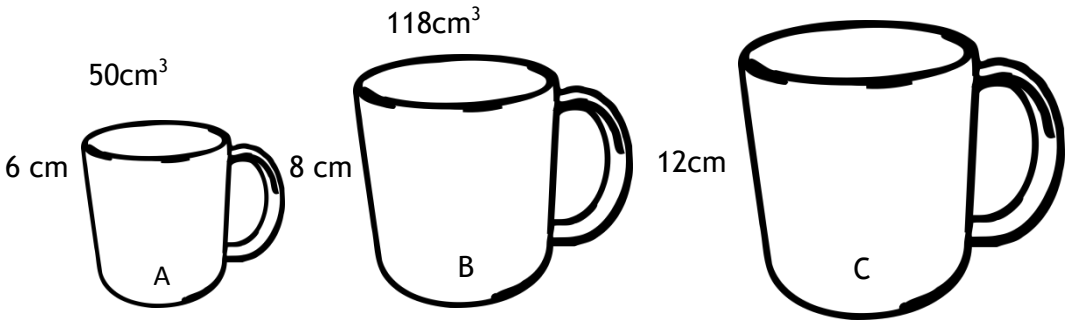
   b. Find the length of x.

8. The tree next to the science block is 5 metres high. At 3pm it casts a shadow which measures 7.5 metres long. Find the height of the science block which has a shadow measuring 30 metres long.

Questions to make you think.

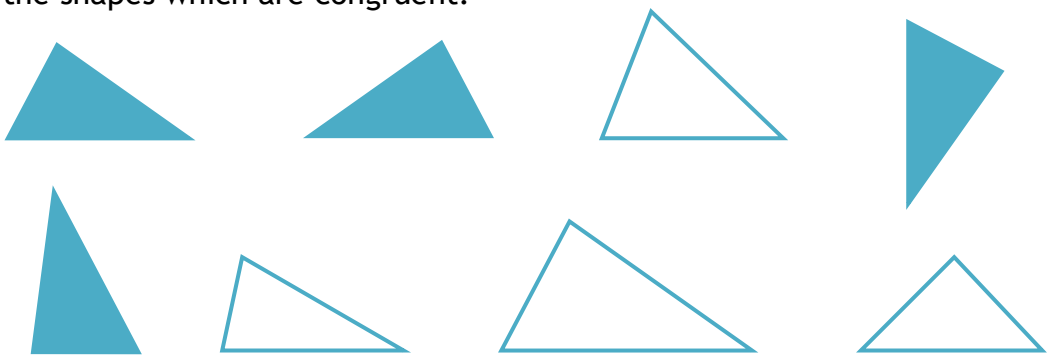
9. Fred takes care of the sports fields. The football field is a square of side 60 m and the athletics field is a square of side 20 m. It takes him 40 minutes to cut the athletics field grass.
   How long will it take Fred to cut the football field grass?

10. Coffee is sold in mugs which come in 3 sizes. The mugs are mathematically similar.
    a. What is the volume of mug C?
    b. Compare the heights and capacities. What do you notice?

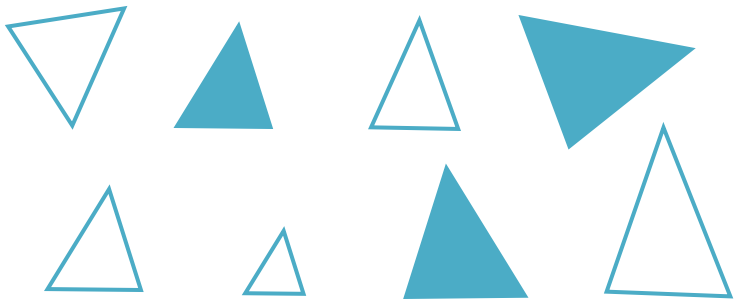


Answers

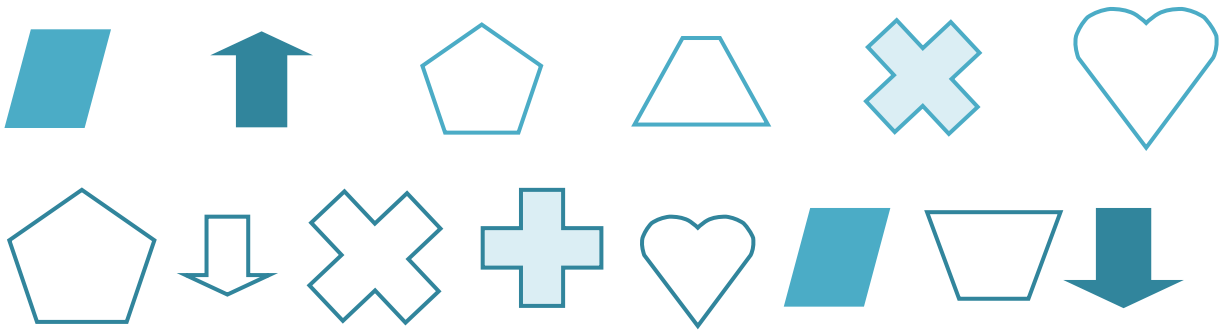
1. Tick the shapes which are congruent.



2. Tick the shapes which are similar.

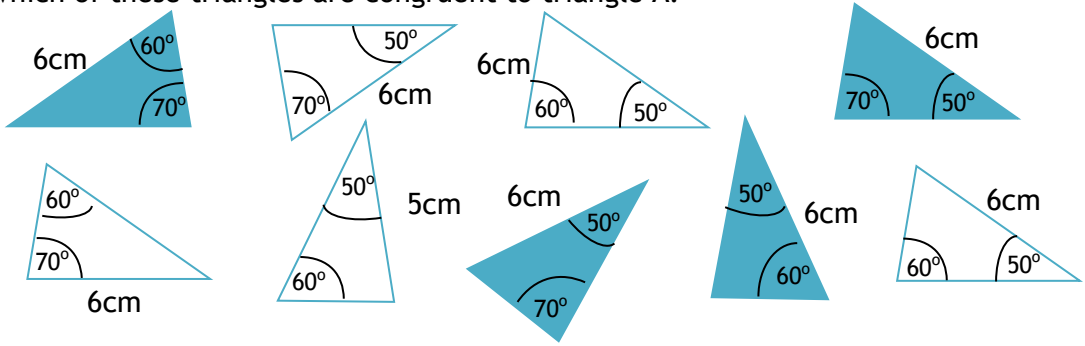


3. Which of the shapes on the bottom row are congruent to a shape on the top row? Join the pairs up.

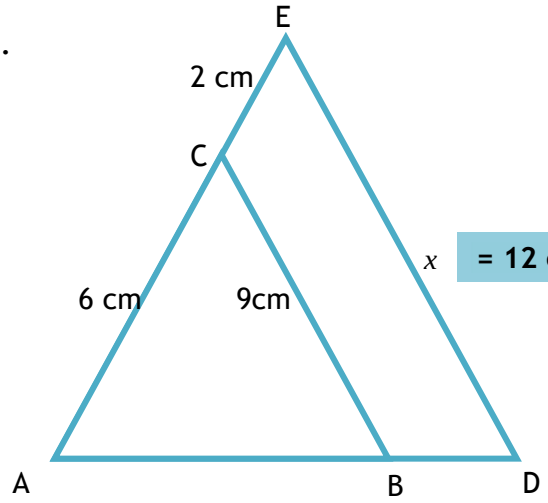


4. This is triangle A.

Which of these triangles are congruent to triangle A?

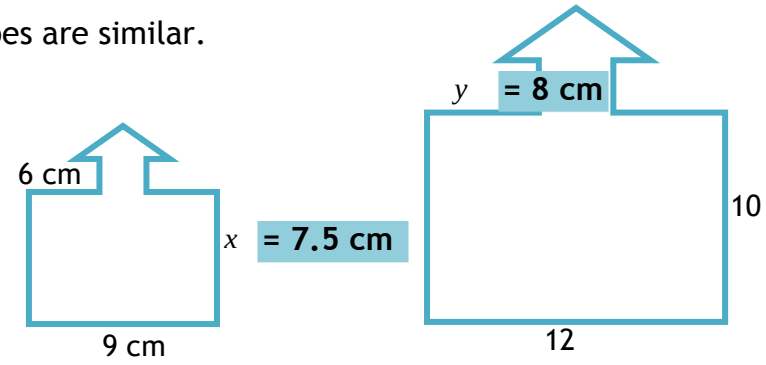


5. Triangle ABC is similar to triangle ADE.
   What is the length of side x.



= 12 cm

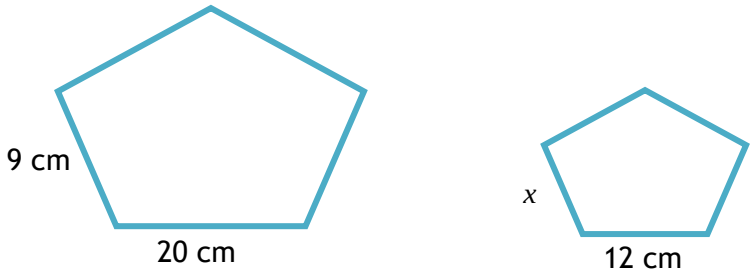
6. These 2 shapes are similar.
   Find x and y.



= 7.5 cm

= 8 cm

7. These 2 shapes are similar.
   a. What is the ratio of the larger shape to the smaller shape? **= 5:3**



   b. Find the length of x. **= 5.4m**

8. The tree next to the science block is 5 metres high. At 3pm it casts a shadow which measures 7.5 metres long. Find the height of the science block which has a shadow measuring 30 metres long. **= 20m**

Questions to make you think.

9. Fred takes care of the sports fields. The football field is a square of side 60 m and the athletics field is a square of side 20 m. It takes him 40 minutes to cut the athletics field grass.
   How long will it take Fred to cut the football field grass? **=360 mins**

10. Coffee is sold in mugs which come in 3 sizes. The mugs are mathematically similar.
    a. What is the volume of mug C? **C = 400cm^3**
    b. Compare the heights and capacities. What do you notice? **The scale factor is multiplied 3 times to calculate the volume (x sf^3).**