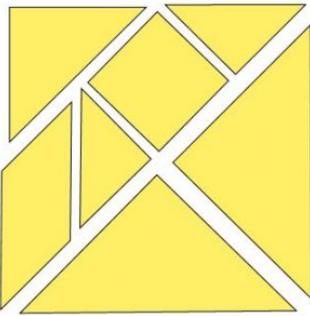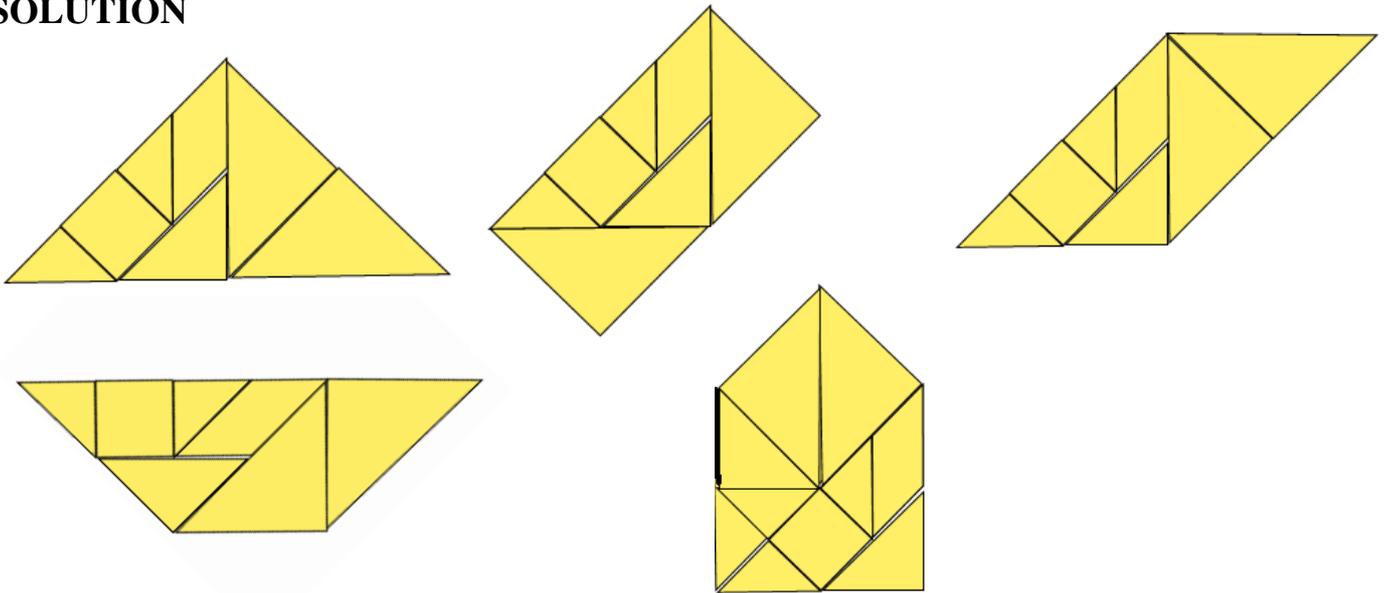| **Tangram**	Cut carefully along the lines to make your 7-piece Tangram.
	Now use the pieces of your Tangram to make • An isosceles triangle • A rectangle • A parallelogram • An isosceles trapezium • A hexagon

SOLUTION

NOTES FOR TEACHERS

Diagnostic Assessment This should take about 5–10 minutes.

1. Write the question on the board, say to the class:
   "Put up 1 finger if you think the answer is A, 2 fingers for B, 3 fingers for C and 4 fingers for D".
2. Notice how the learners responded. Ask a learner who gave answer A to explain why he or she gave that answer and DO NOT say whether it is right or wrong but simply thank the learner for giving the answer.
3. Then do the same for answers B, C and D. Try to make sure that learners listen to these reasons and try to decide if their own answer was right or wrong.
4. **Ask the class again to vote for the right answer by putting up 1, 2, 3 or 4 fingers. Notice if there is a change and who gave right and wrong answers.** It is important for learners to explain the reason for their answer otherwise many learners will just make a guess.
5. If the concept is needed for the lesson to follow, explain the right answer or give a remedial task.
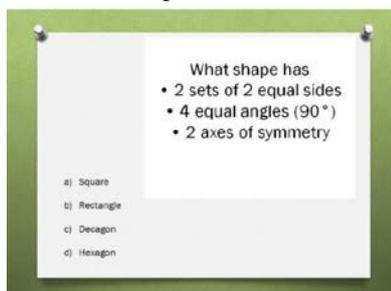
The correct answer and possible misconceptions:
A. Two axis of symmetry cannot be a square as it has four axis of symmetry.
B. The correct answer.
C. **A Decagon has 10 sides.**
D. **A hexagon has 6 sides.**

https://diagnosticquestions.com

Why do this activity?
This activity encourages learners to think about the properties of certain 2D shapes and use this knowledge to build those shapes from the pieces of the tangram. It deepens their understanding of those geometrical properties as a result of this. The activity is designed to lead to spontaneous discussion of how to make the shapes from the pieces provided.

Intended learning outcomes
- Recognition of two-dimensional shapes
- Development of understanding of the properties of those shapes

Suggestions for teaching
Start by showing the learners pictures of the two dimensional shapes they have to make from the tangram. Ask them to identify them. Ask them to tell you as many properties as they can of those shapes. Get the learners to discuss what we mean by regular and irregular shapes.
Ask the learners to try and make the isosceles triangle from the pieces in the tangram. If some learners are finding this difficult give them an outline of the isosceles triangle and ask them to fit the pieces into the triangle with no spaces. Continue in this way until all of the shapes are made.

Key questions
The shapes are all made from the same pieces. What is different about the shapes and what is the same?
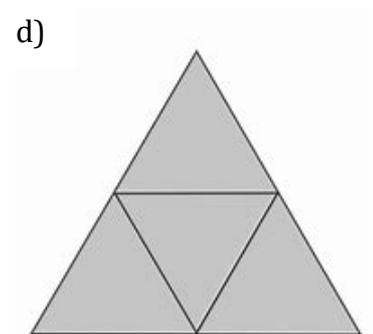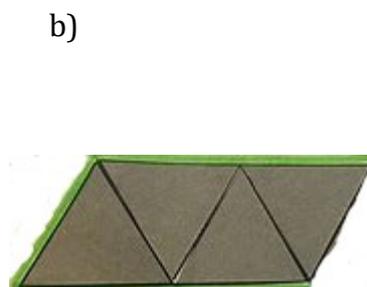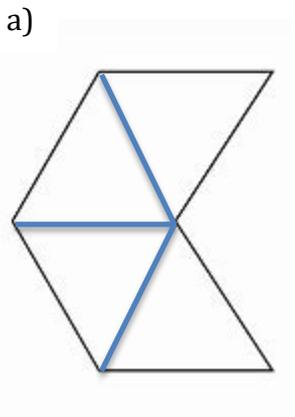Through asking questions establish the properties of the shapes that have been made.

Possible extension
Four equilateral tiles are put together to make a new shape.
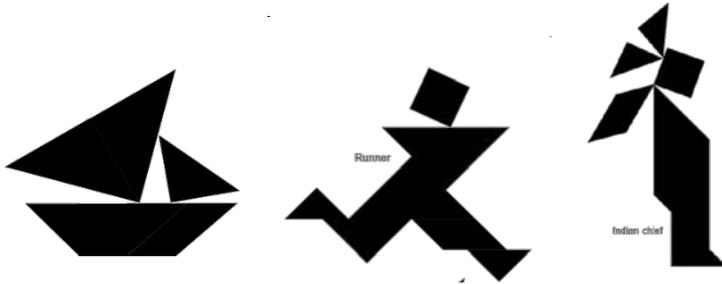Which shape is impossible to make?
a) Irregular hexagon
b) Parallelogram
c) Isosceles trapezium(four equilateral triangles cannot make an isosceles trapezium)
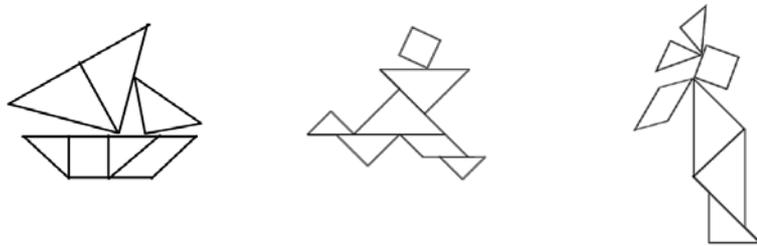d) Regular triangle

Solutions

a)

b)

d)

Possible support

Make these pictures from the triangles in the tangram.

Runner

Indian chief

Solutions