

Babylonian Maths



Triangles and Squares

BM 15285, in Eleanor Robson, *Mesopotamian Mathematics 2100–1600 BC* (Clarendon Press, 1999), 208ff



The length of the squares is 60 rods. Inside it I drew 12 triangles and 4 squares. What are their areas?

The drawing on the left above shows a diagram and text from part of a Babylonian tablet now in the British Museum. On the right is a simplified version with the text in English. The dotted lines show how we assume the diagram looked originally.

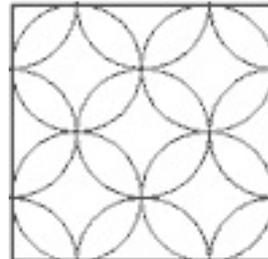
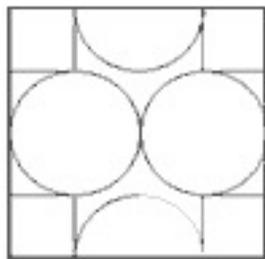
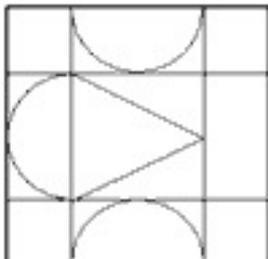
A rod was a unit of length - can you find out how long it was?

Can you solve the problem?

- Start by drawing an exact copy of the diagram on squared paper.
- Use your diagram to work out the area of a small square and a small triangle in terms of the squares on your paper.
- If the length of the side of the outer square is 60 rods, how long does that make the lengths of the small squares in rods? So what would its area have been if you were a Babylonian?
- What would the area of the triangles have been?

Symmetry

- Copy the diagram, drawing in the lines which are dotted so that you have a complete symmetrical figure.
- How many lines of symmetry does it have?
- What rotational symmetry does it show?
- How many triangles are there in total? Is it 12, or are there more?
- How many squares are there in total in your pattern? Is it 4, or are there more?



Above are three more figures from the tablets.

- How many lines of symmetry does each one have?
- What rotational symmetry does it have?

Babylonian Maths: Triangles and Squares

<http://motivate.maths.org/content/BabylonianMaths>

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