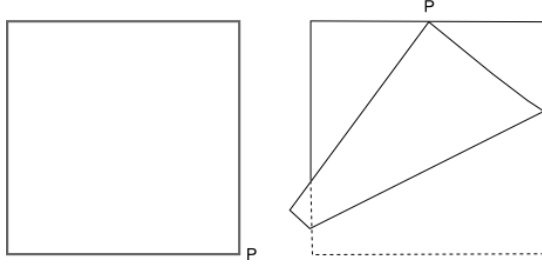


## FOLD A SQUARE

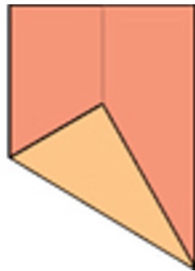


A square of paper 8 cm by 8 cm is folded so that the corner P coincides with the midpoint of an opposite edge as shown in the diagram.

Investigate the three triangles (where there is a single thickness of the paper) that are formed by folding in this way.

## HELP

### MAKING 60



These two folds in any rectangular sheet of paper give an angle of  $60^\circ$ . Why?

If you find it difficult to solve to find the lengths and angles in the problem above then try this question first. It is a similar context involving a similar fold but with more accessible results. It can also lead to some practical mathematics, making an equilateral triangle just by paper folding.

<https://aiminghigh.aimssec.ac.za/years-9-10-making-sixty/>

## NEXT

If the square of paper is folded so that the corner P does not coincide with the midpoint of an opposite edge, where would you place the fold for a

5, 12, 13

or an 8, 15, 17

or a 7, 24, 25 triangle?

Are any of these findings extendable to other quadrilaterals?