Solutions for the Fold Testing Activity

These solutions show ALL of the possible fold lines that can be found to show that the shape is symmetrical. Shapes without lines marked on them are not symmetrical: they cannot be folded in half to produce exactly overlapping halves. Children may not find all possible fold lines, but you can encourage them to search for more by asking if they think there is a different way of folding the shape into two halves.

Things to watch for:
Students may think that folding on the diagonal works for the rectangle. You should confirm that it does not. The square, on the other hand, can be folded on the diagonal. Many students will be able to find two different folds for the cross, but in fact there are four possibilities.

Other interesting possibilities to try:
(i) A circle (there are infinitely many folds that work, all of which pass through the centre)
(ii) A regular hexagon: see how many different folds can be made (there are six).