

Paper Folding Geometry

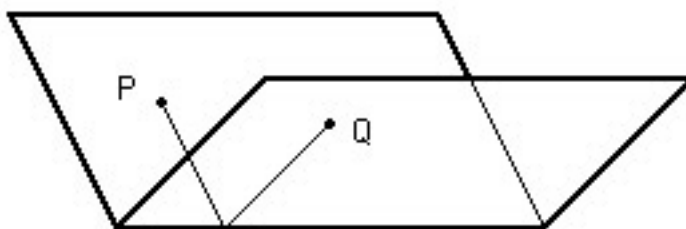
Activity 1. A straight line

Wax paper works best to see the creases. Patty paper also works great and is very practical.

Basic constructions

A straight line

- Mark two points P and Q on the patty paper.
- Fold over a portion of a sheet of paper so that point P is placed on top of point Q.
- Hold two points P and Q tightly together using a finger and the table, and crease the paper with the other hand.
- Extend the crease in both directions to form a straight line.
- Mark one new arbitrary point R on the crease.
What can you say about the distance of R to P and to Q?
- Fold along the crease again to verify.
- Use other points along the crease to convince yourself that the points on the crease are equidistant from P and Q.

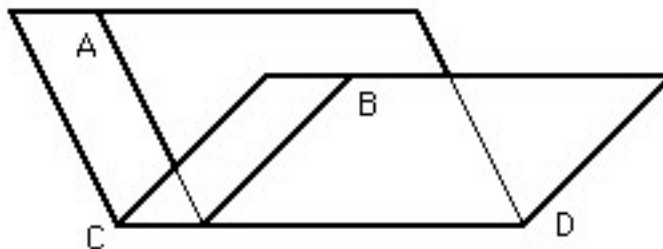


- Draw the segment connecting the points P and Q.
What is the angle formed by the drawn segment and the crease?
Where does the crease intersect the segment?

Activity 2. A straight line perpendicular to a given straight line

A line that is perpendicular to a segment and divides the segment in two equal parts is called the perpendicular bisector of the segment.

- Draw a segment and make a crease that divides the segment in half and is perpendicular to it.
- Draw or fold a line AB on patty paper.
- Fold the sheet over so that a segment of the given line AB is folded over onto itself.
- Holding the lines together with the fingers of one hand and the table, form a crease with the other hand.



- Observe the angle between the original line and the new crease.