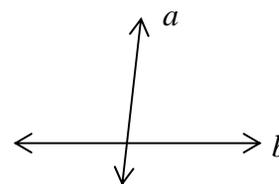


Patty Paper Investigations

1. What is the shape of a corner of a sheet of patty paper?

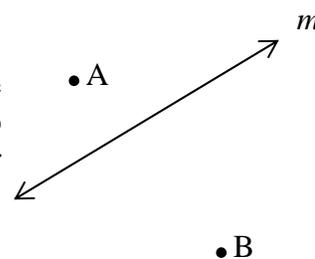
2. Explain how you could use your patty paper to determine whether line a is perpendicular to line b .



3. When you measure the distance between two figures, you always measure the shortest distance. The shortest distance between two points is the _____ distance. The shortest distance between a point and a line is the _____ distance between that point and the line. The shortest distance between a point and a plane is the _____ distance between that point and the plane.

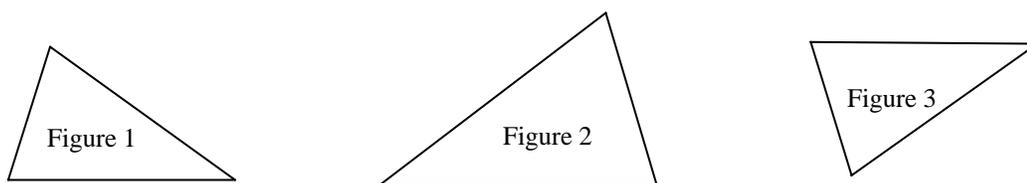
4. Explain how you could use patty paper to determine which point, A or B, lies the shortest distance from line m .

5. Use only your patty paper to locate a point, C, that is the same distance from line m as point B. Use mathematics to explain how you located point C. Use words, symbols, or both in your explanation.

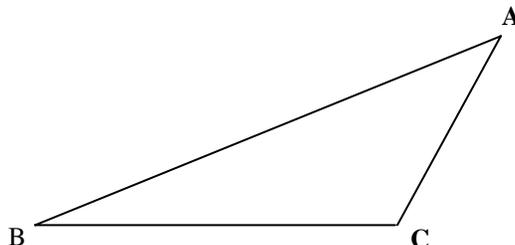


6. Is the distance from point C to point A the same as the distance from point C to point B? Use your patty paper to justify your answer.

7. Two figures are congruent if all pairs of corresponding parts are congruent. Are any of the triangles shown below congruent? How could you use your patty paper to justify your answer?



8. Explain how could you use your patty paper to create a triangle congruent to triangle ABC?



- Answers:
1. The corner of patty paper is a right angle.
 2. Corners can be matched to see if the angle is a right angle.
 3. Linear, perpendicular, perpendicular
 4. Place point A on one edge of the patty paper. Line up the edge of the patty paper that is perpendicular to the edge along A with line m . Mark point A on the patty paper. Using the same two edges of the patty paper, repeat the process for point B. Points A and B are now marked on the same edge of the patty paper. Since point A is closer to the corner used to line up with line m , point A is a shorter distance from line m than point B.
 5. Repeat the process to measure the distance of point B from line m . Slide the patty paper along line m and make point C using the copy of point B.
 6. No, I copied and labeled points A and B on the patty paper. Keeping the patty paper on point A, I rotated the patty paper to try to line up point B on the patty paper with point C. It was impossible to do since $AB < AC$.
 7. Figure 1 and 3 are congruent. You could measure sides and angles using patty paper to demonstrate any of the following: ASA, SAS, SSS, or AAS congruence.
 8. You could use the patty paper to measure sides and/or angles to demonstrate any of the following triangle congruence theorems: SAS, ASA, SSS, AAS.