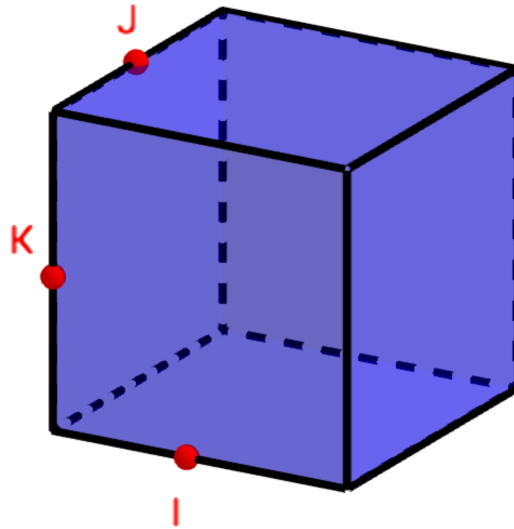


Cube Cross Sections

Performance Task:

In the image below, there are three points (J, K, and I) located on different edges of a cube.



Since the 3 points are not collinear, there is a single plane which passes through all three points I, K, and J. This plane would create a cross section through the cube.

1. What is the shape of the cross section formed by slicing the cube above with the single plane through all three points J, K, and I?
2. If you were able to move points I, K, and J anywhere along the edges of the cube, being sure the 3 points are not collinear, what are the different cross section shapes which can be formed?
3. What is the least number of sides a cube cross section shape can have?
4. What is the greatest number of sides a cube cross section shape can have?
5. Could you slice cross sections to form shapes with each of the numbers of sides in between the least and greatest number of sides? (Draw images demonstrating each of the different cross sections you could find.)