



De'Questions and De'Answers

These questions are to be asked of students with regard to the transforming design on the suggested website.

Analysis Questions and Answers:

Q: Do you recognize any geometric parts?

A: Students should recognize many geometric parts from their study of two- and three-dimensional design in *Geo Jammin'*

Q: As you study the shapes on the screen, can you separate the entire design into the parts of geometry you know?

A: Line segment, point, triangle, rectangles, angles, and vertex (ices)

Q: How would you classify the shapes in the design?

A: Two-dimensional polygons

Q: Why are they two-dimensional?

A: Because they are flat, and have no depth. We can only see one surface and sides and there are no edges or faces.

Q: What kind of transformation do the triangles make? Are they at all different? How are they alike?

A: Slide or translation; they are different in their position on the screen, but their size stays the same and doesn't change.

Q: What kind of transformation do the rectangular arms make? Are they at all alike? How are they different?

A: Turn or rotational; all the arms are the same length and they are all moving, but some are turning one way and some are turning another way.

Q: Does any shape flip or reflect?

A: No

Q: Do the size and shape of the geometric parts change?

A: No. The triangles are all the same shape and the rectangular arms are the same shape. The triangles are congruent to each other. The rectangles are congruent to each other.

Synthesis question and Answer:

Question: How can three-sided polygons create a polygon with four sides? Five? Six? Eight?

Answer: Triangles can be moved together to make many new geometric forms. It takes two triangles to make four sided polygons. In order to do this, one of the triangles must be flipped. You can make a parallelogram and a trapezoid. Using more than two triangles can make other shapes. You can make a pentagon, hexagon, and octagon using triangles and turning and flipping them to make other designs.