What are Pattern Folding Problems?

- You’ll be presented with a flattened, 2D paper cutout
- You must determine the 3-dimensional structure formed when the cutout is folded along its creases

2-Dimensional Cutout and 3D Figure

Given (a) a 2-dimensional cutout, you are tasked with determining its (b) folded configuration.

Sample Cutout

Although we never see the backside of our cutouts, for demonstration we will assume that its back is red.

Because all folds are made into the page, we never need to worry about what is on the backside of the cutout.

To demonstrate, look at the following paper cutout:
- And let’s assume its back is red.

Pattern folding questions typically appear in 1 of 3 forms.
Shape-Matching Form
- Shape-matching questions test your ability to distinguish the shapes/sizes of the cutout’s faces.

Shape-Matching Question
In a shape-matching question, you must correlate the unique sizes/shapes of faces in the cutout (blue) to their correlating faces in the answer choices.

Pattern-Matching Question
In a pattern-matching question, you must correlate the connectivity of faces based upon the patterns on the faces of the cutout.

Pattern-Matching Form
- Instead, you must match the connectivity of patterns on the faces of the cutout.
  - These generally come in the form of dice questions.