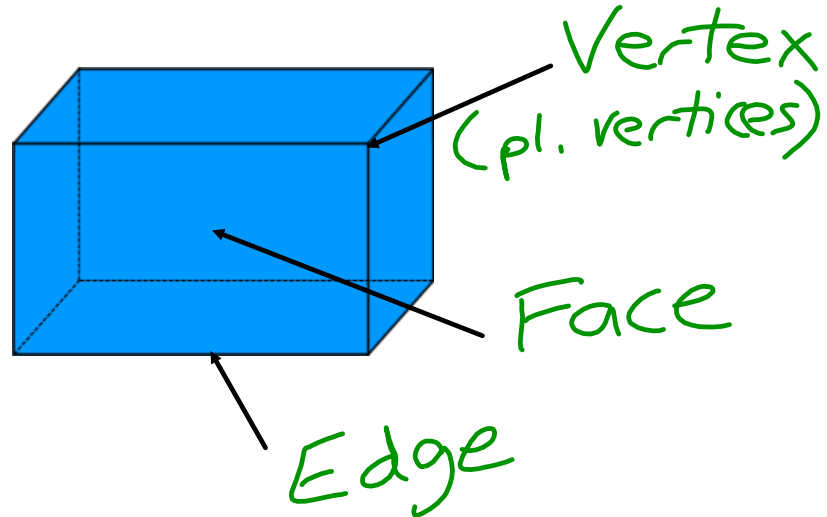
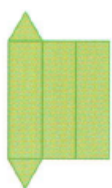


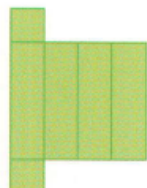
Build Models of 3D Figures



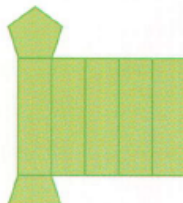
1. a) Use linking polygons to construct the nets of these prisms. Which faces are congruent? How many bases and how many faces does each prism have?



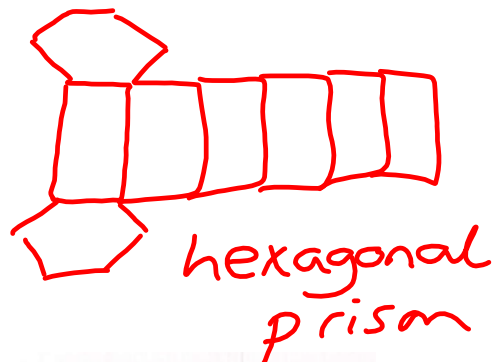
triangular prism



square-based prism



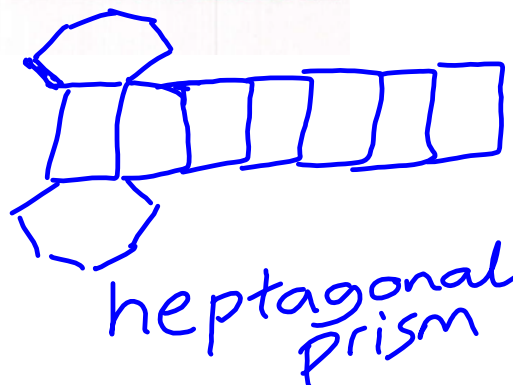
pentagonal prism



hexagonal prism

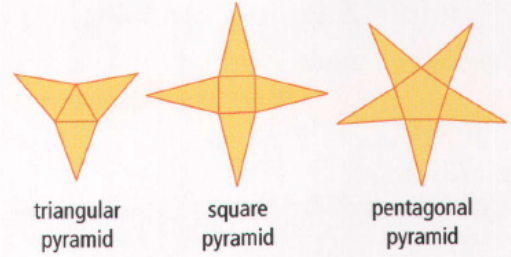
b) What patterns do you see in the nets? Draw the next two nets in the pattern.

of rectangles needed equals the # of sides on the named based.



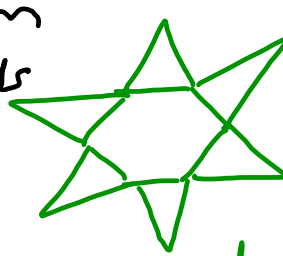
heptagonal prism

2. a) Study these nets of different figures. How do these diagrams differ from the ones in step 1? How are they the same? Predict the shape when these nets are folded.
- b) What patterns do you observe in their bases and number of faces? Draw the next two nets in the pattern.

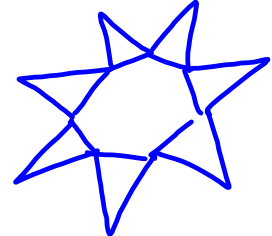


a) All fold to form a point. Pyramids

b) # faces = double the # of sides on the base



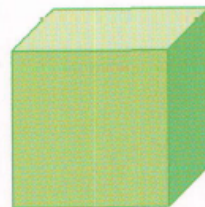
hexagonal pyramid



heptagonal pyramid

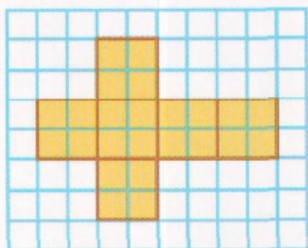
Example 1: Build a Model Using a Net

Make a model of a cube using a net.

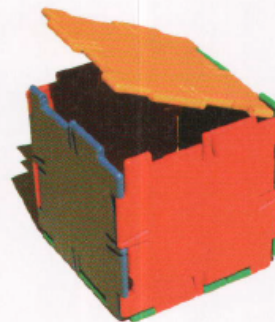


Solution

Method 1: Draw a Diagram



Method 2: Use a Manipulative

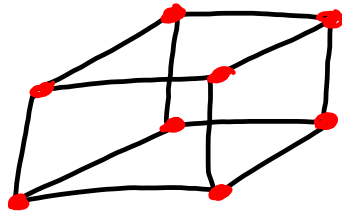


Example 2: Build a Model Using a Skeleton

- a) Make a model of a cube using a **skeleton**.
- b) How many vertices and how many edges does the cube have?

skeleton

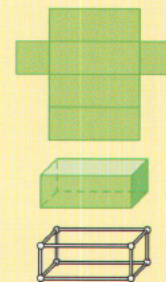
- a framework for a three-dimensional figure, made of its edges



Vertices = 8
Edges = 12

Key Ideas

- A net shows all the faces that make up the surface of a three-dimensional figure.
- A net can be used to construct a model of a three-dimensional figure.
- A skeleton is a frame formed by joining the edges of a three-dimensional figure.



Page 251 #s 3 - 13 & 16