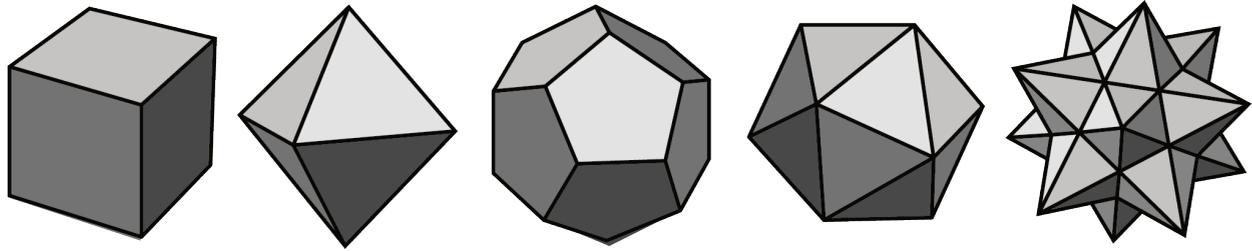


Unit 1 Lesson 11: Polyhedra and Nets

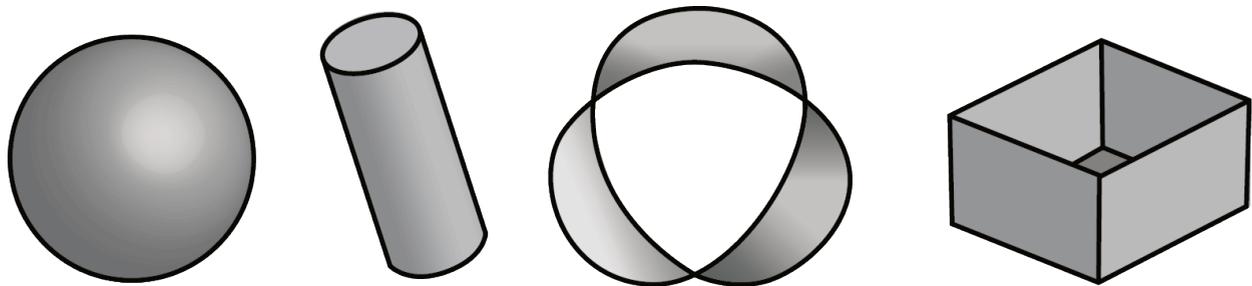
1 What are Polyhedra? (Warm up)

Student Task Statement

Here are pictures that represent polyhedra:

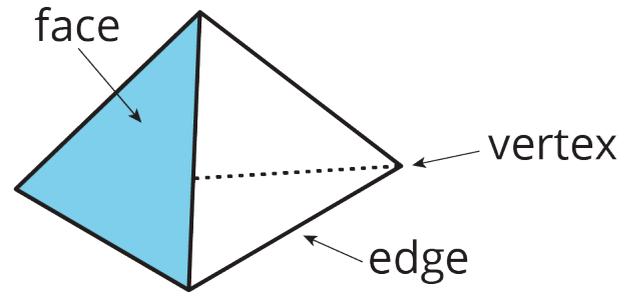
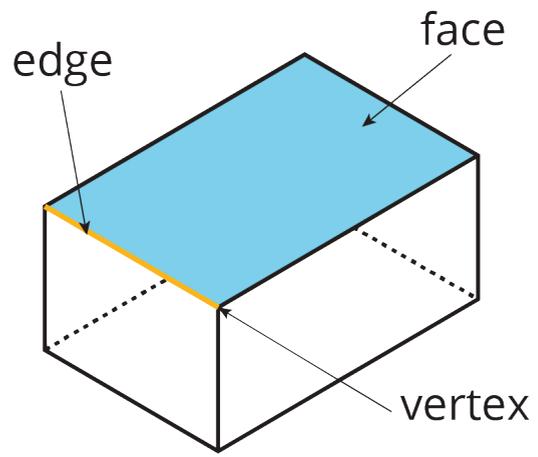


Here are pictures that do *not* represent polyhedra:



1. Your teacher will give you some figures or objects. Sort them into polyhedra and non-polyhedra.
2. What features helped you distinguish the polyhedra from the other figures?

Activity Synthesis

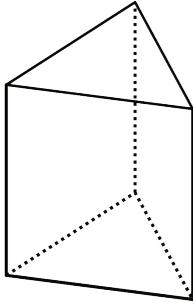


2 Prisms and Pyramids

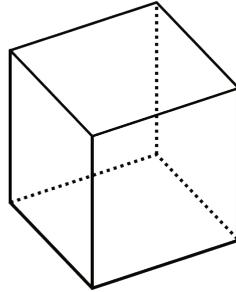
Student Task Statement

1. Here are some polyhedra called **prisms**.

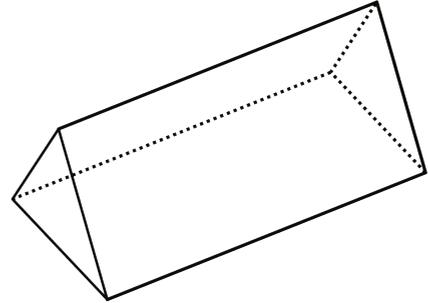
A



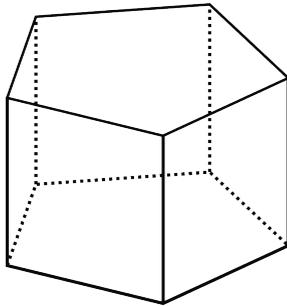
B



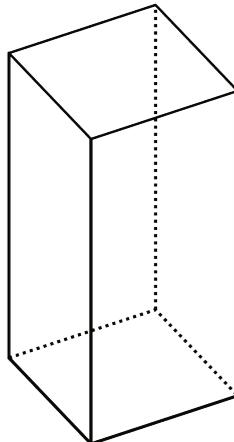
C



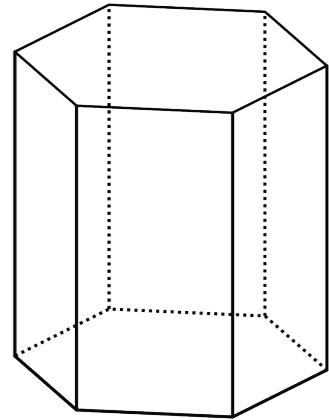
D



E

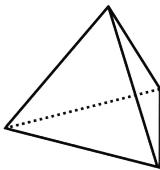


F

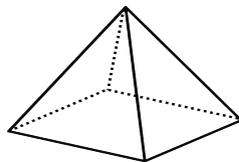


Here are some polyhedra called **pyramids**.

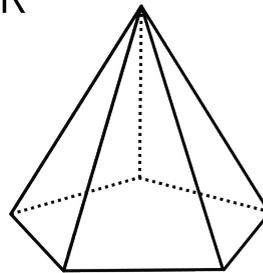
P



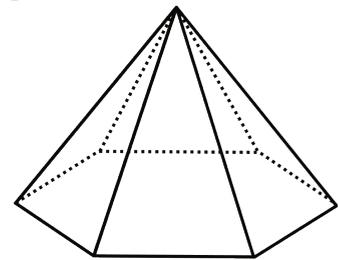
Q



R



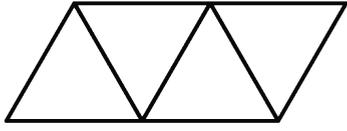
S



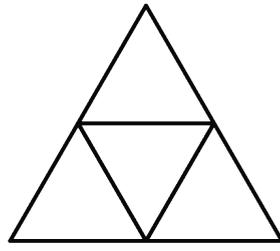
a. Look at the prisms. What are their characteristics or features?

b. Look at the pyramids. What are their characteristics or features?

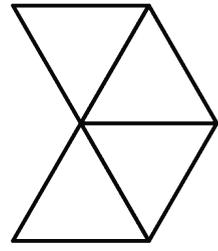
2. Which of these **nets** can be folded into Pyramid P? Select all that apply.



net 1



net 2



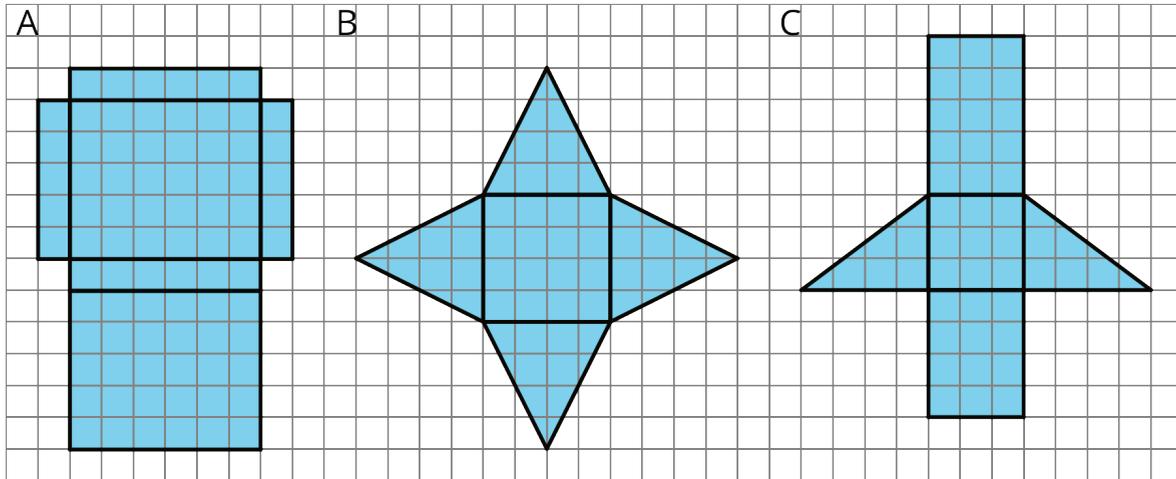
net 3

3. Your teacher will give your group a set of polygons and assign a polyhedron.
 - a. Decide which polygons are needed to compose your assigned polyhedron. List the polygons and how many of each are needed.
 - b. Arrange the cut-outs into a net that, if taped and folded, can be assembled into the polyhedron. Sketch the net. If possible, find more than one way to arrange the polygons (show a different net for the same polyhedron).

3 Using Nets to Find Surface Area

Student Task Statement

1. Name the polyhedron that each net would form when assembled.



2. Your teacher will give you the nets of three polyhedra. Cut out the nets and assemble the three-dimensional shapes.
3. Find the **surface area** of each polyhedron. Explain your reasoning clearly.