11.1 & 11.2

Exploring Solids & Surface Area of Prisms & Pyramids

Polygons
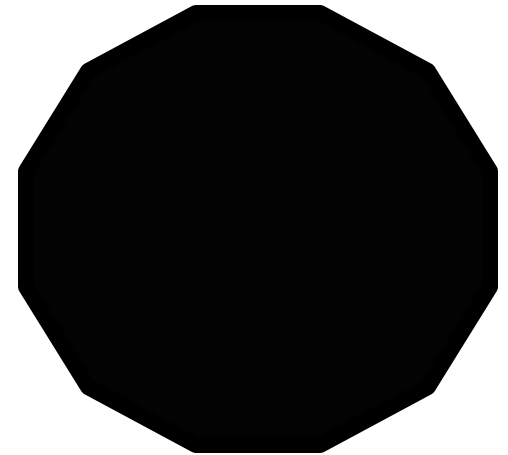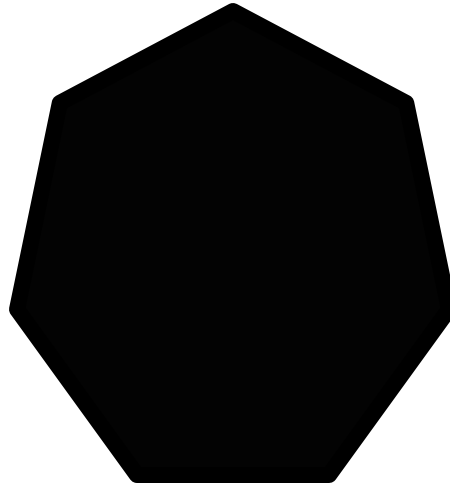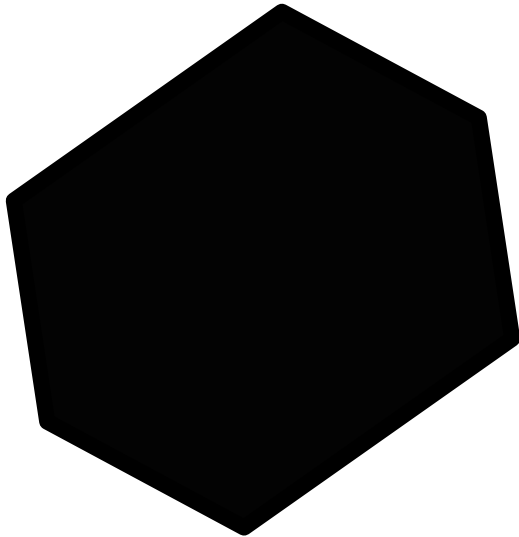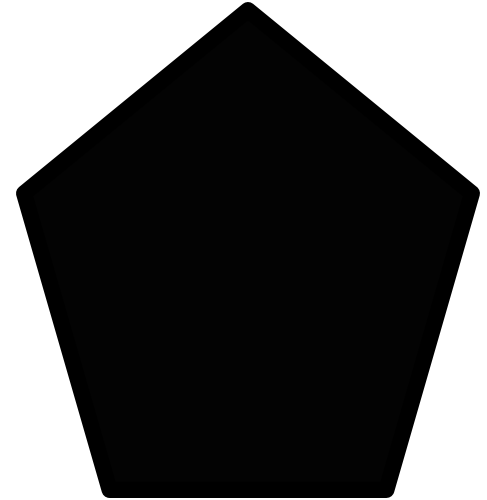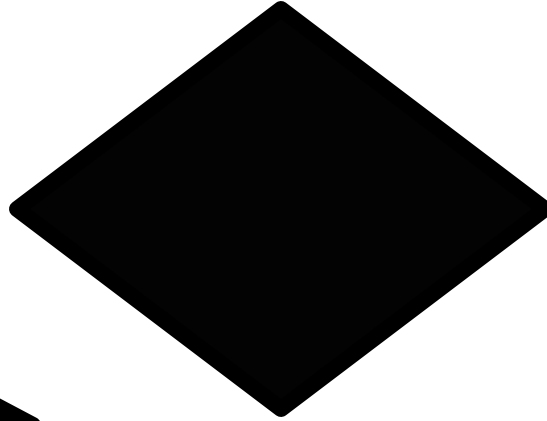
Polyhedrons

3D figures composed of polygon faces

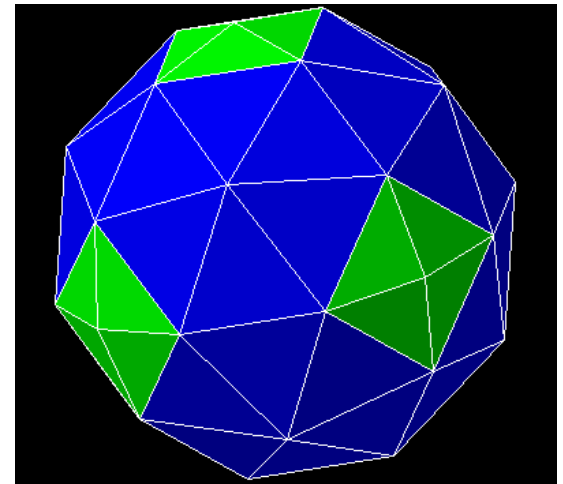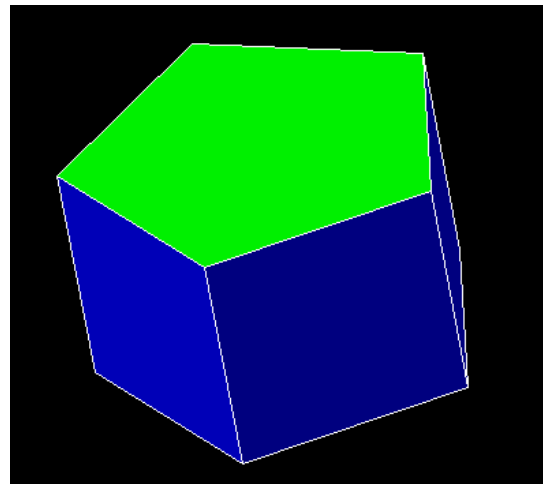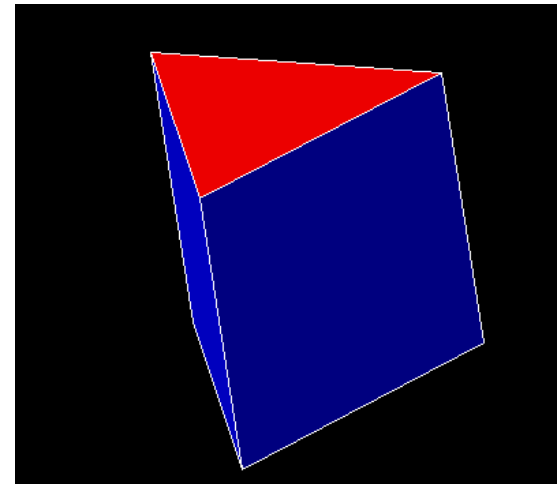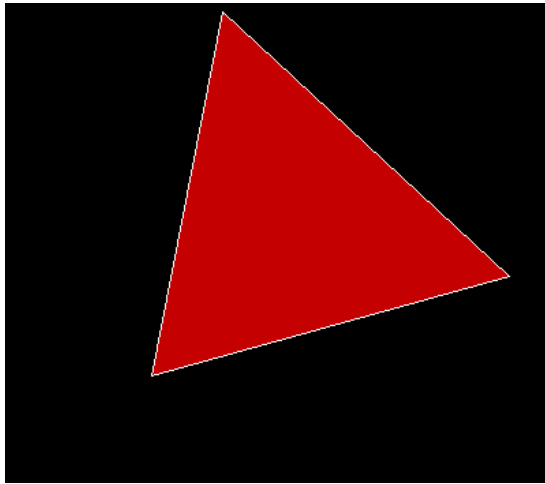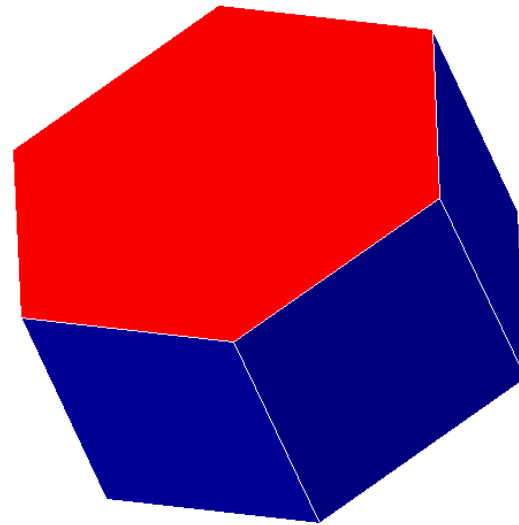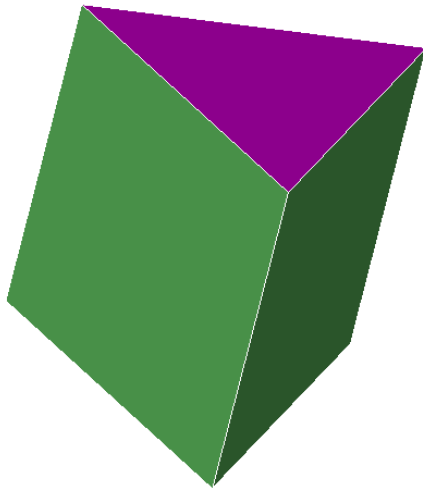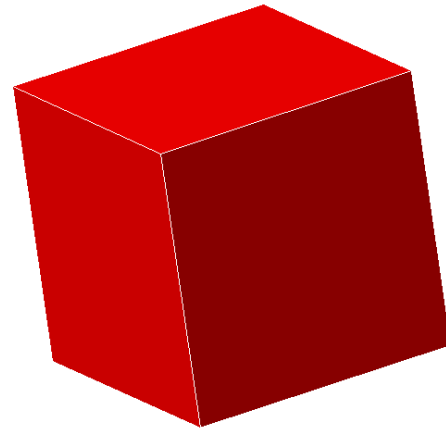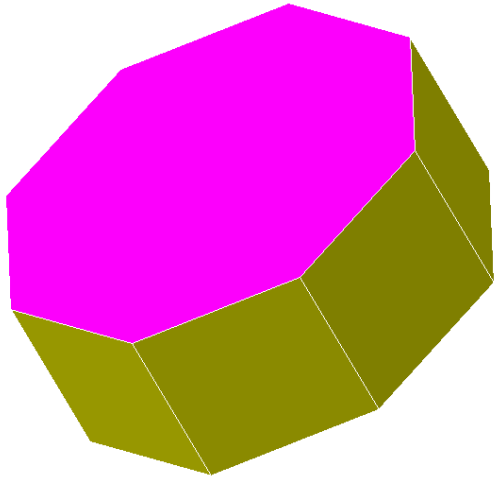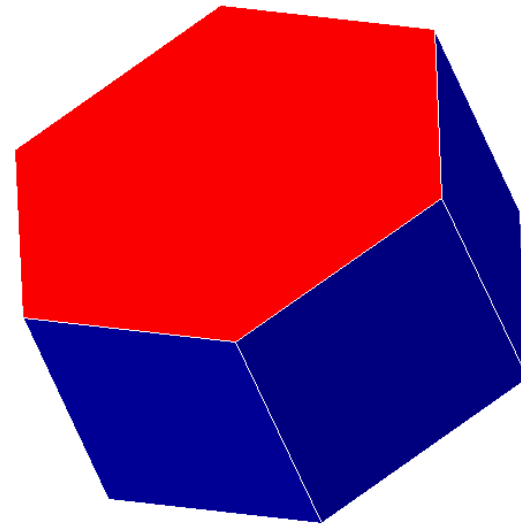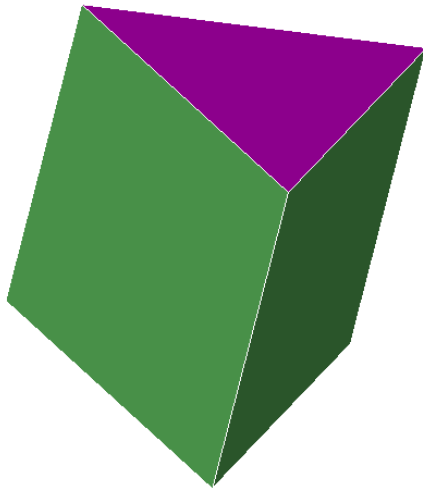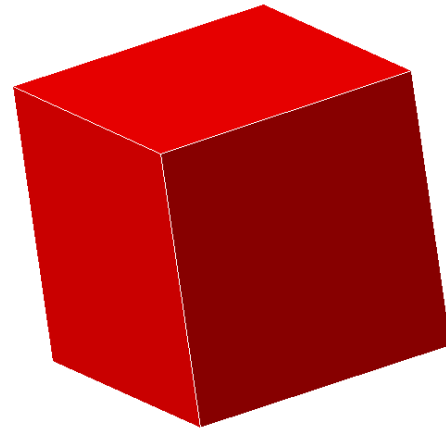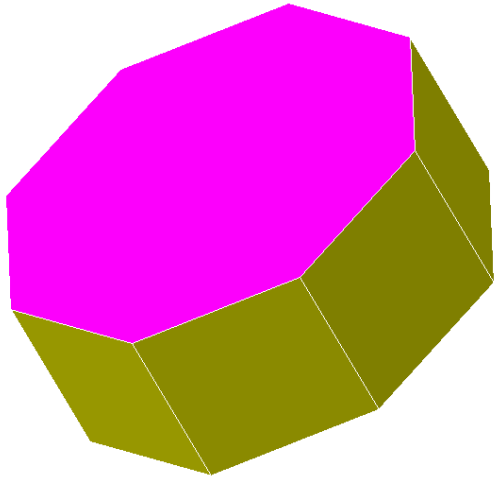# Prisms

These are examples of prism:

What makes a prism?

Pyramids

These are examples of pyramids:
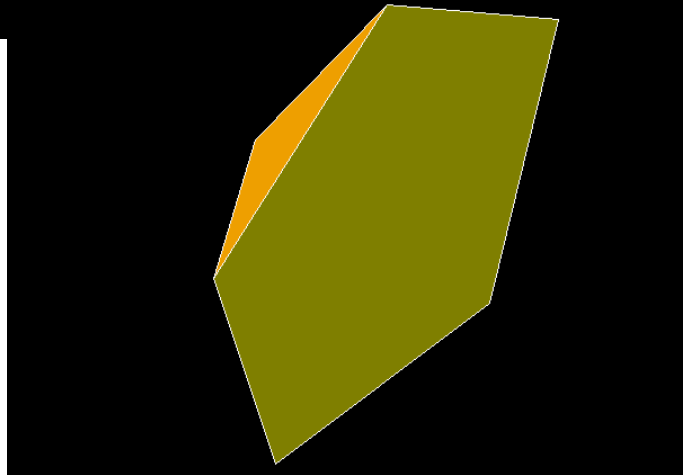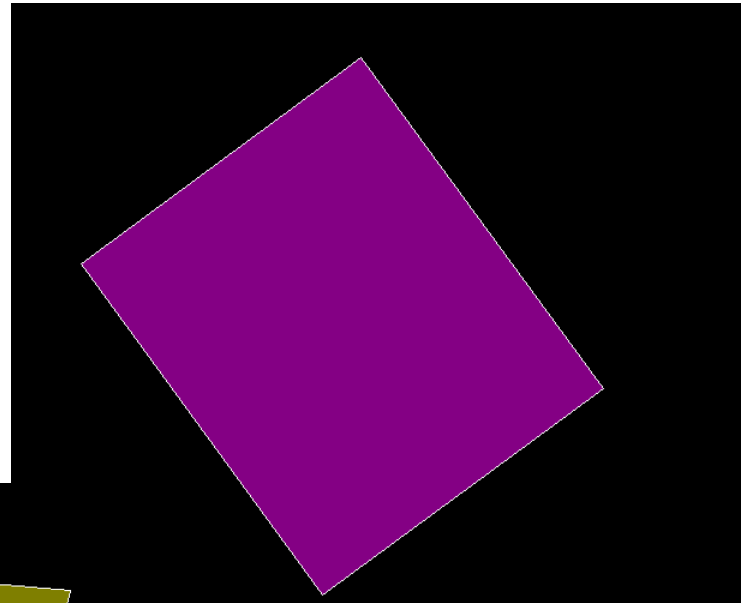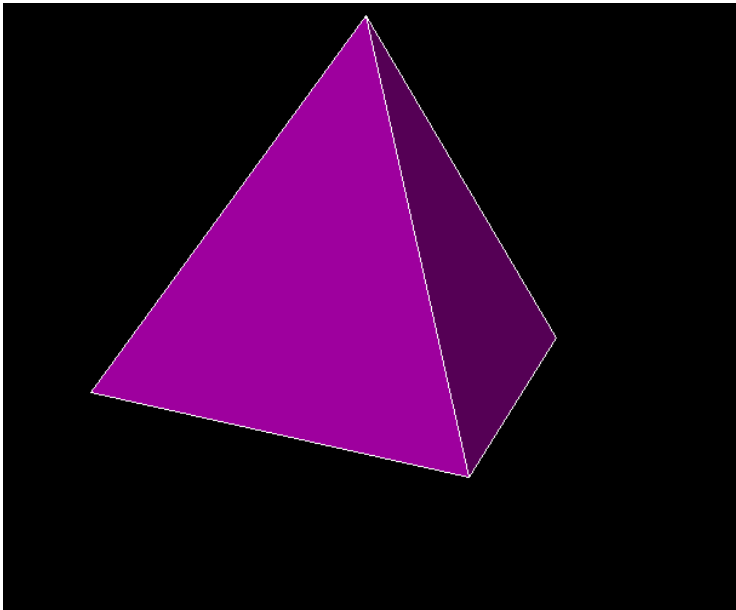
What makes a pyramid?
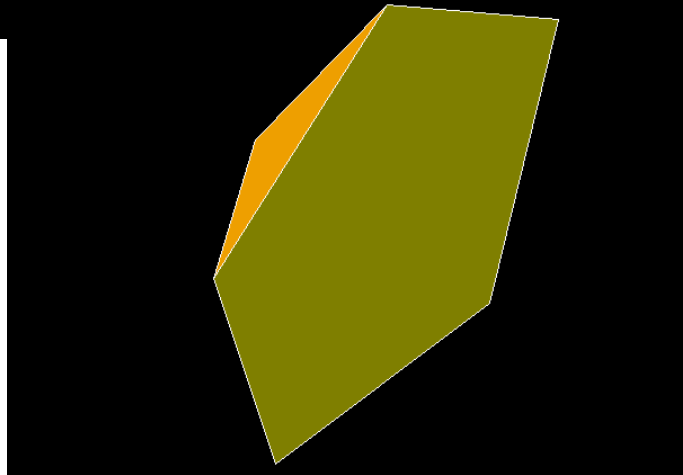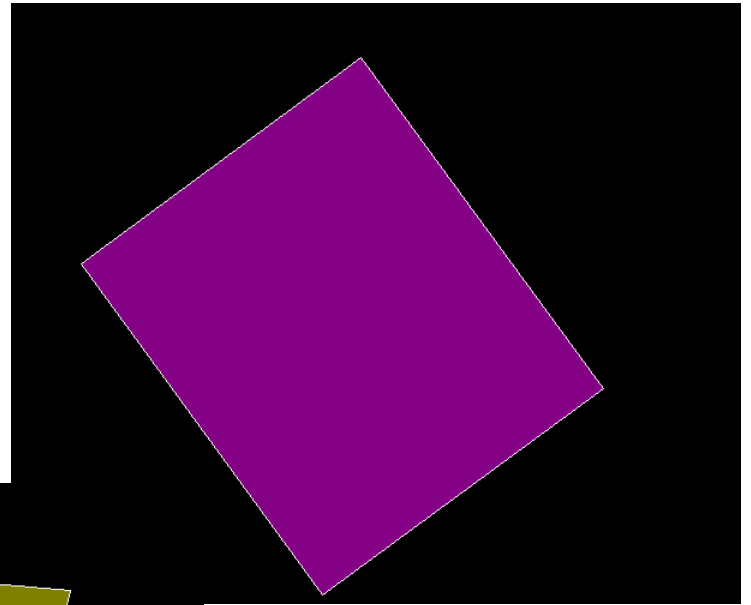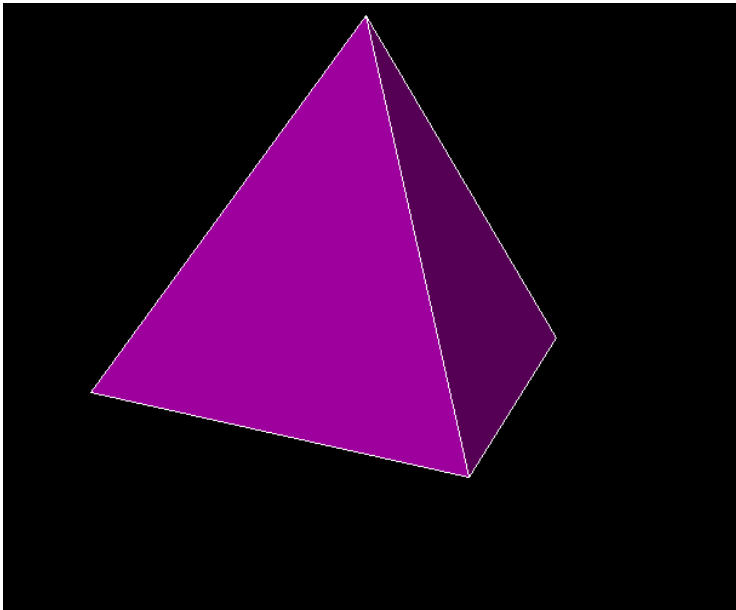
Parts of a Prism
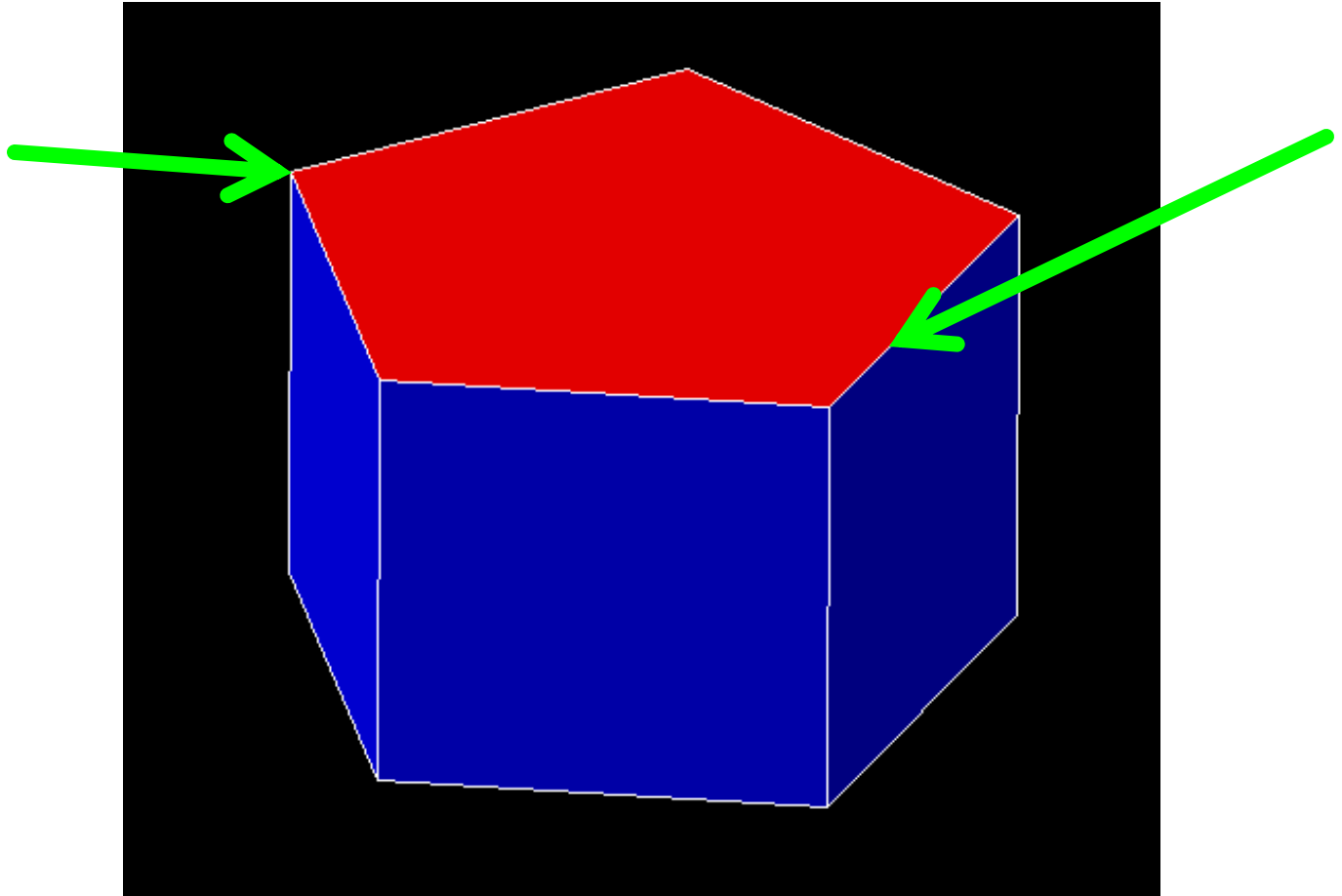
Parts of a Prism
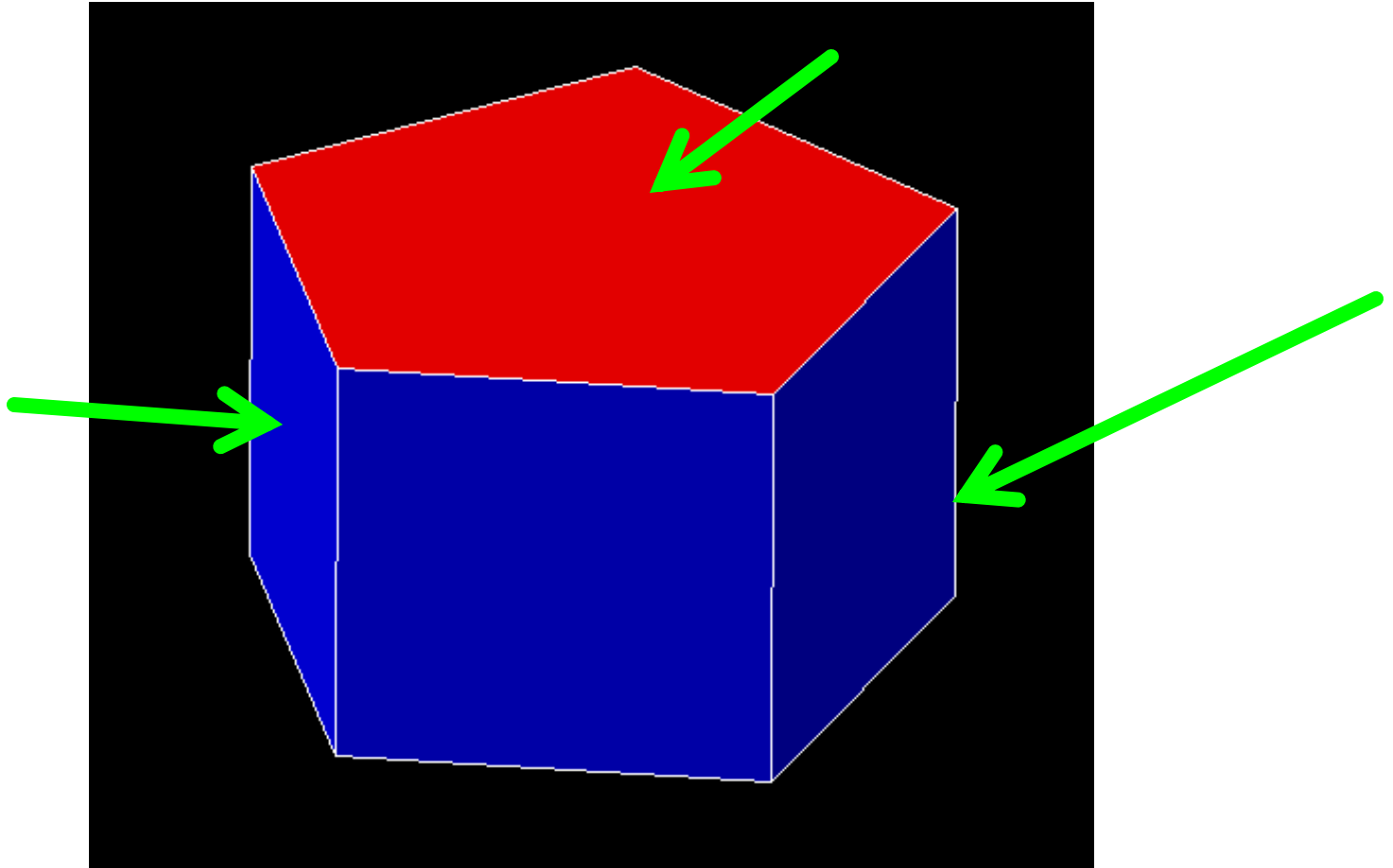
Parts of a Pyramid
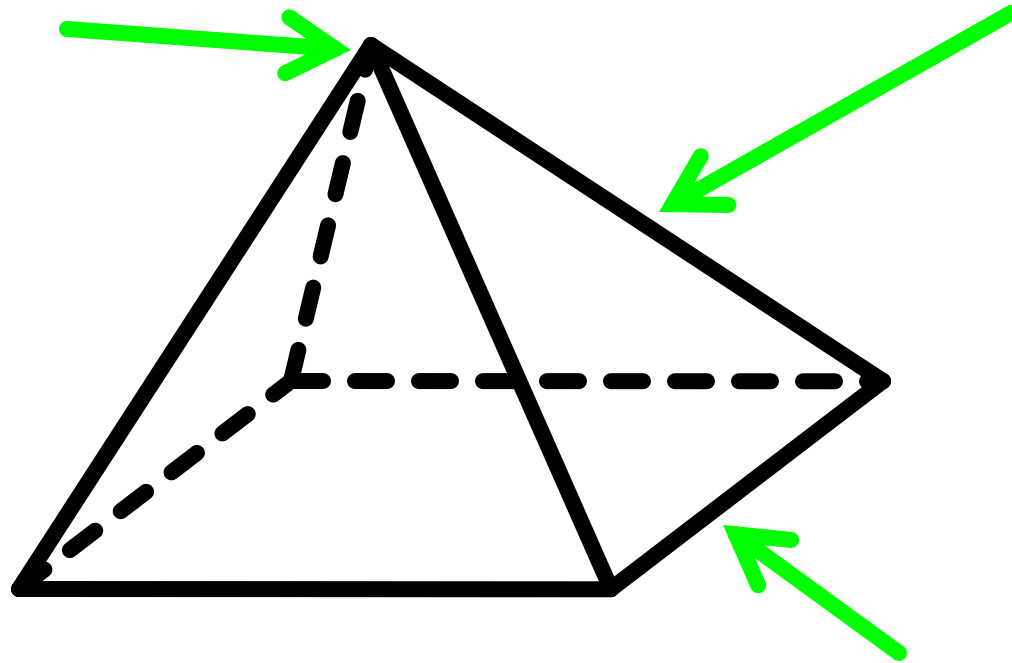
Parts of a Pyramid
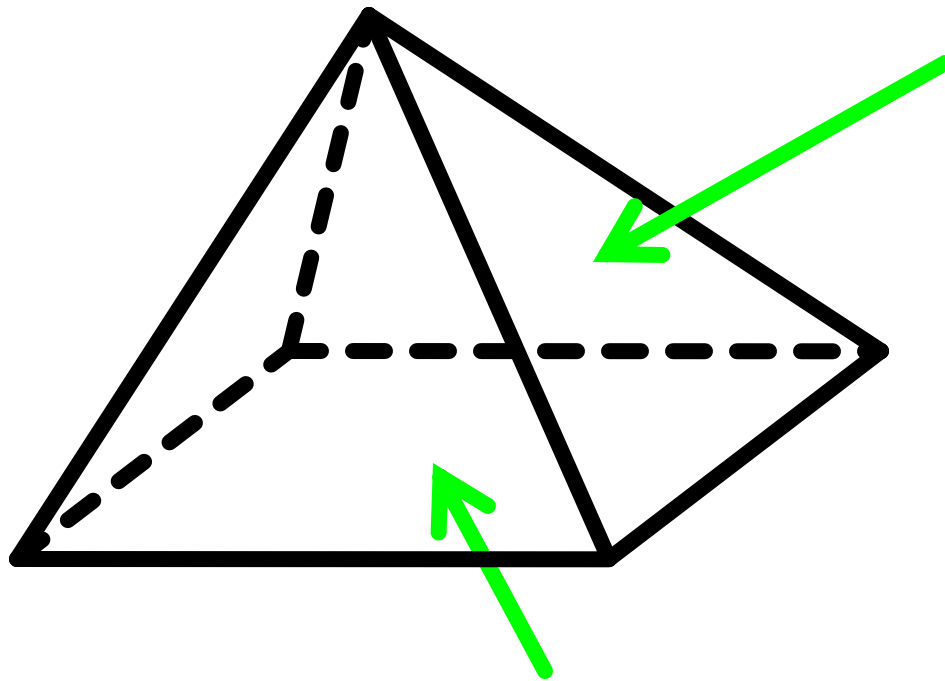
What's the name of this shape?

How many faces does it have?

How many edges does it have?

How many vertices does it have?
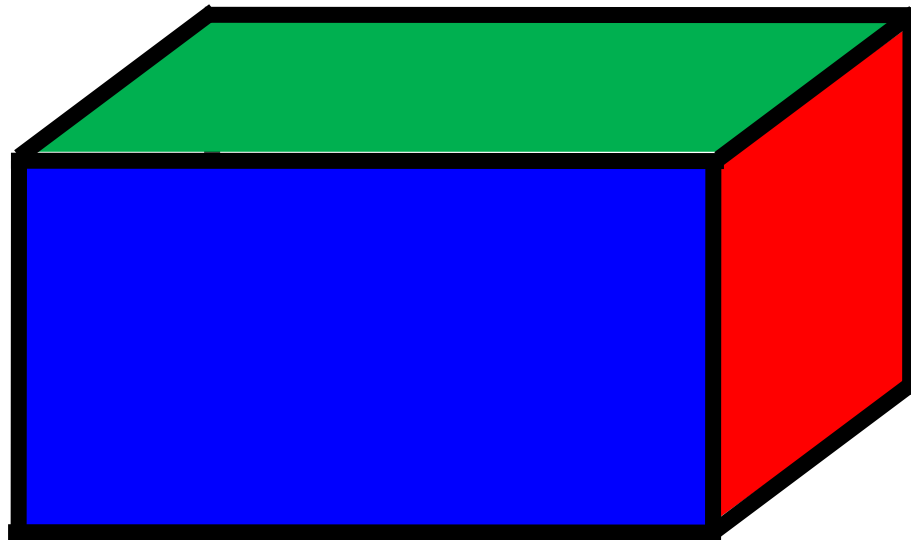
What's the **name** of this shape?

How many **faces** does it have?

How many **edges** does it have?

How many **vertices** does it have?
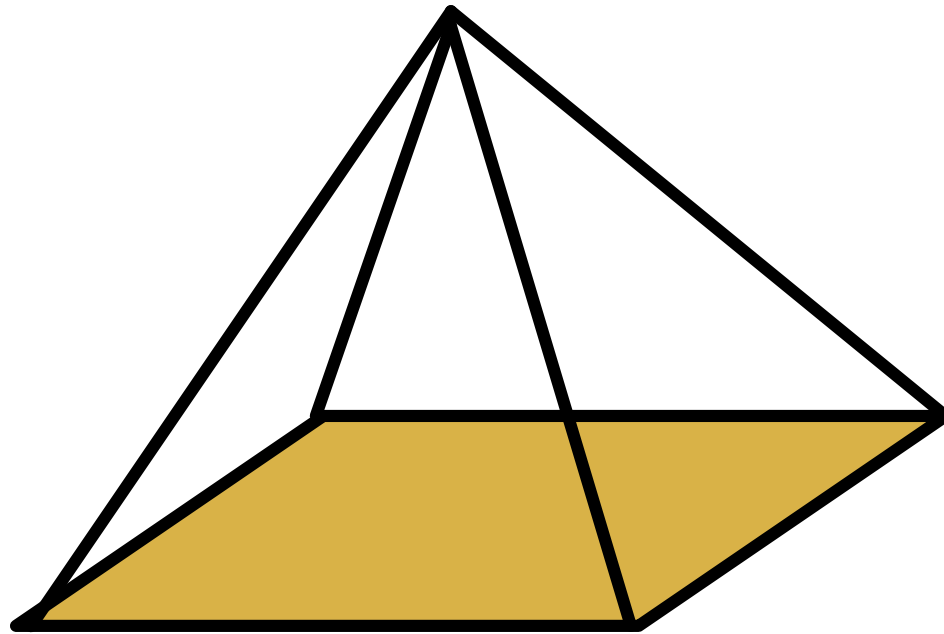
Is this a polyhedron?
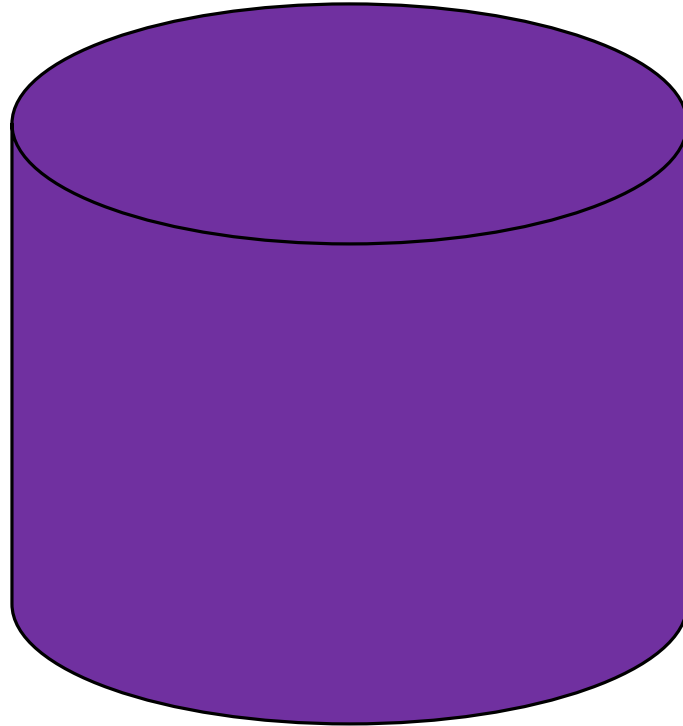
Why not?

Parts of a Cylinder
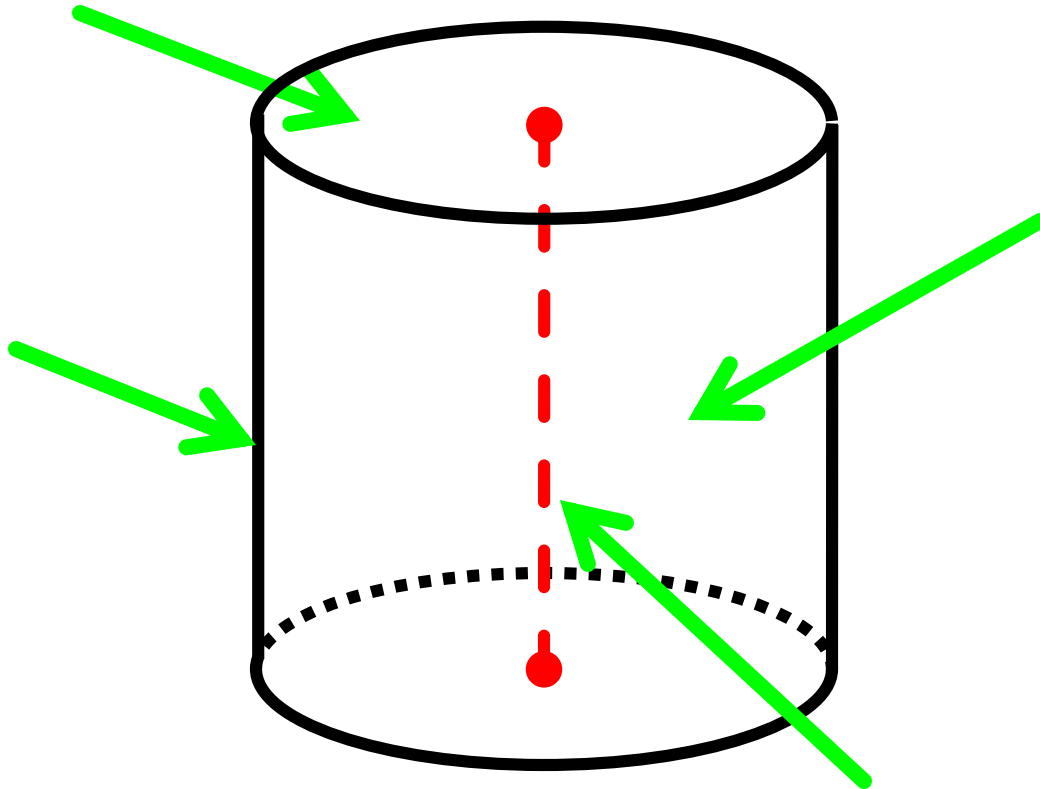
Right or Oblique?
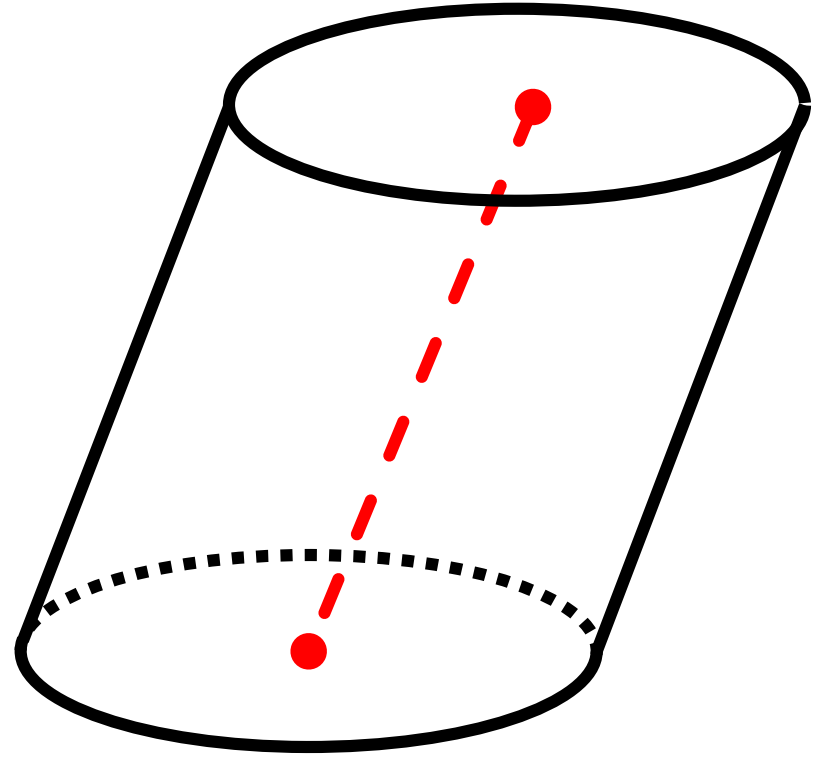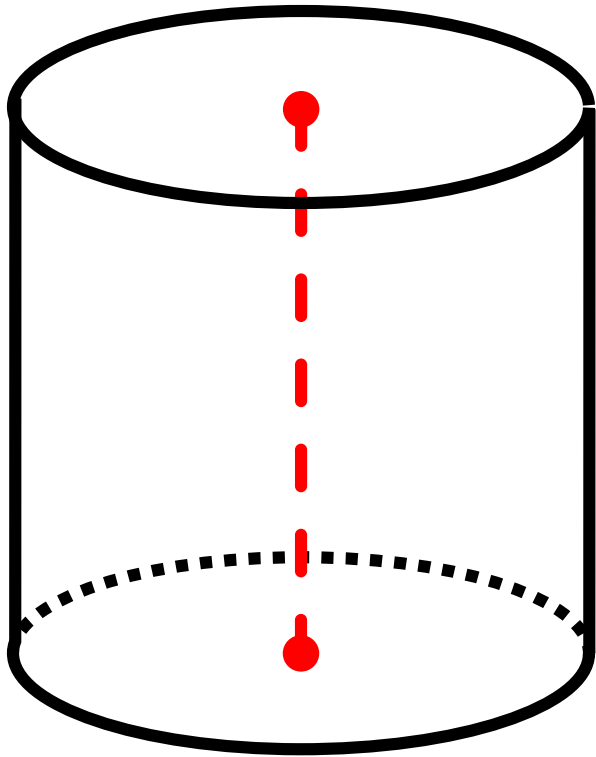
Getting to know polyhedrons

Tell whether each solid is a polyhedron. If it is, name the polyhedron.

a.
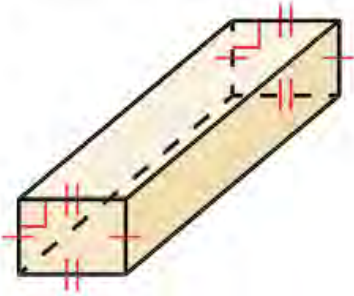
b.
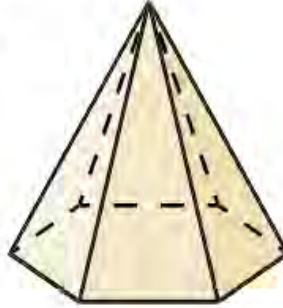
c.

On your own

Tell whether the solid is a polyhedron. If it is, name the polyhedron.

1.
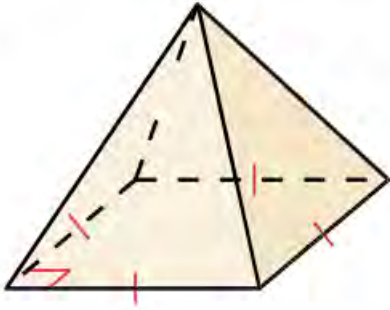
2.
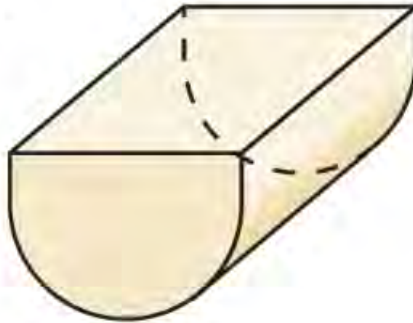
3.
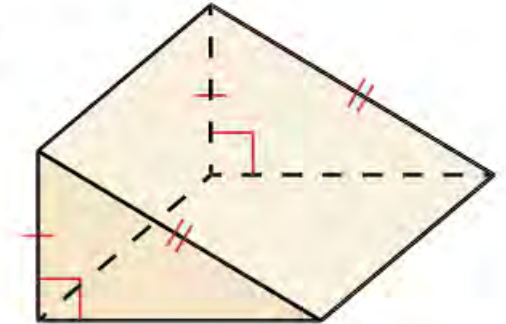
Cross Sections

Describe the shape formed by the intersection of the plane and the solid.
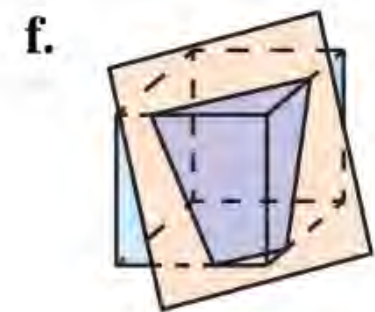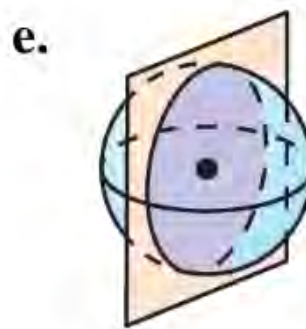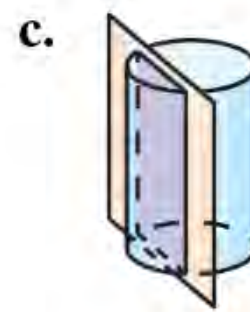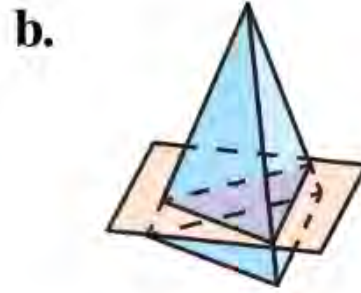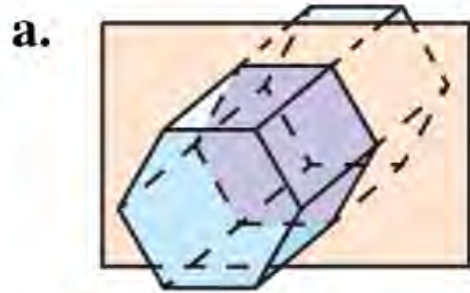
a.

b.

c.

d.

e.

f.

SOLUTION

Sketch the solid produced by rotating the figure around the given axis. Then identify and describe the solid.

a.

b.
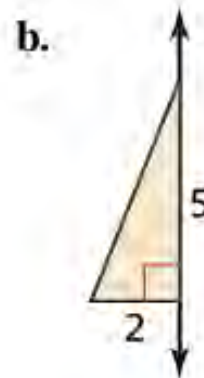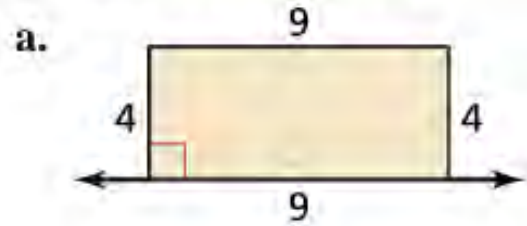
On your own

Sketch the solid produced by rotating the figure around the given axis. Then identify and describe the solid.

7.

3

4

8.

6

8   8

6

9.

7

7

Faces, Vertices, and Edges

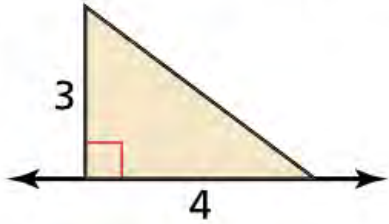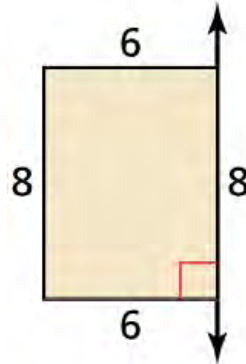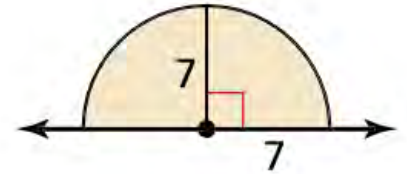|	Polyhedron name	Number of bases	Number of faces	Number of vertices	Number of edges
A.	triangular prism		5	6	
B.	triangular pyramid			4	6
C.	rectangular prism		6		12
D.	rectangular pyramid			5	8
E.	pentagonal prism		7	10	
F.	pentagonal pyramid		6		10
G.	hexagonal prism			12	18
H.	hexagonal pyramid		7	7	
I.	octagonal prism		10		24
J.	octagonal pyramid		9	9	

EULER'S FORMULA

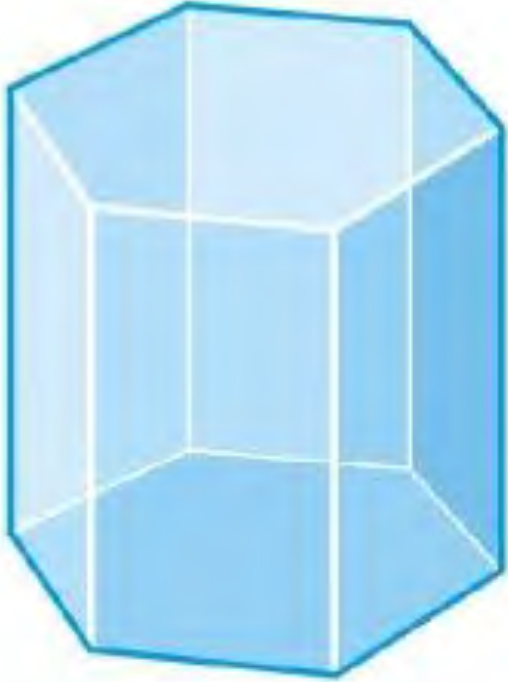## FOR FACES, VERTICES, AND EDGES

Drawing Nets
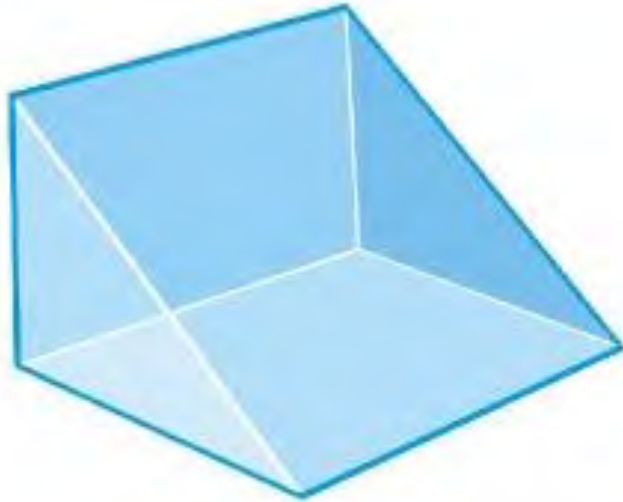
Drawing Nets

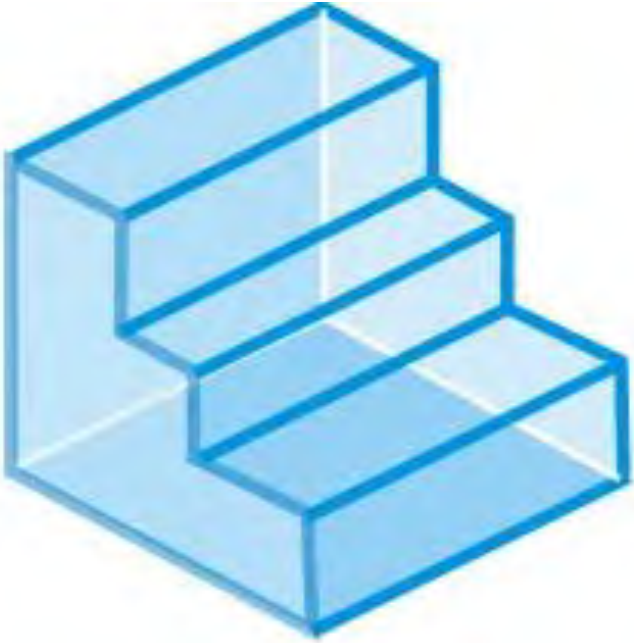# Drawing Nets

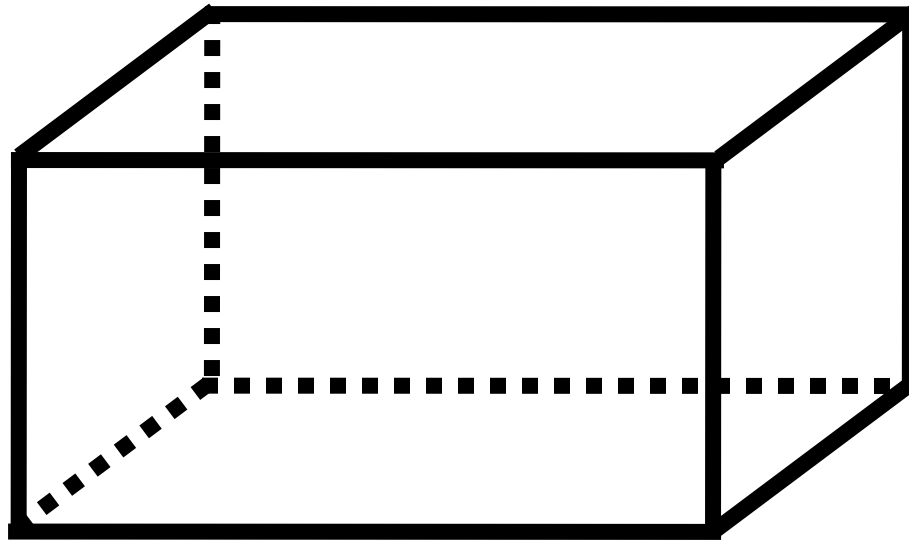# Drawing Nets

Drawing Nets – CHALLENGE!!

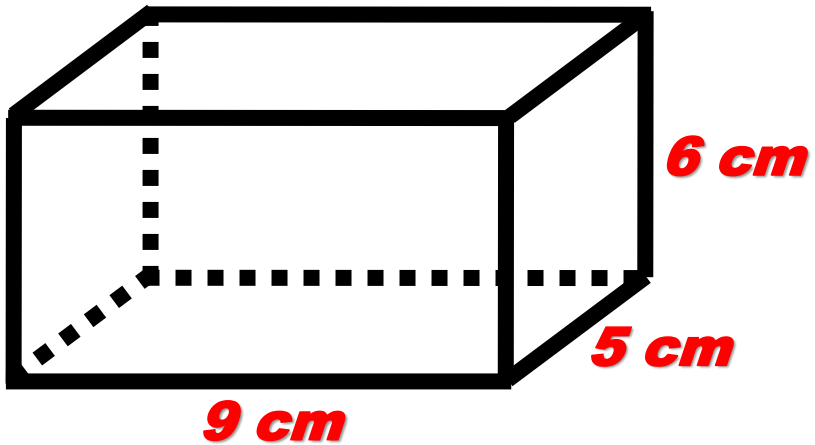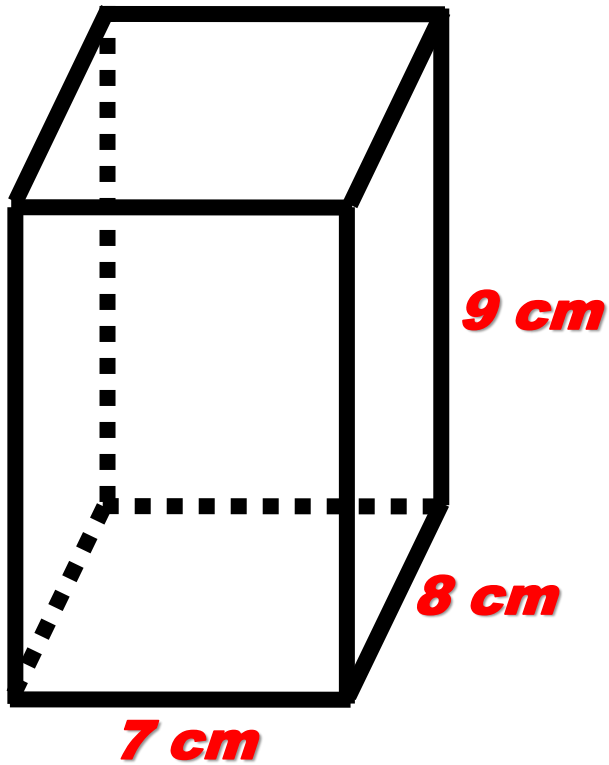# Surface area of a rectangular prism

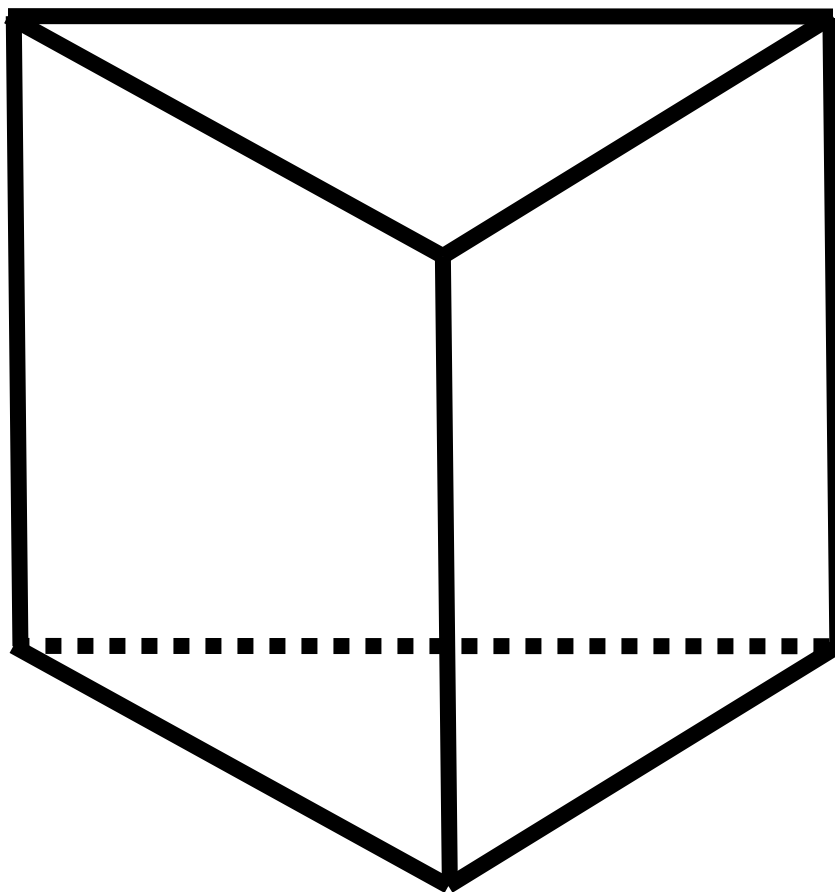# PRACTICE

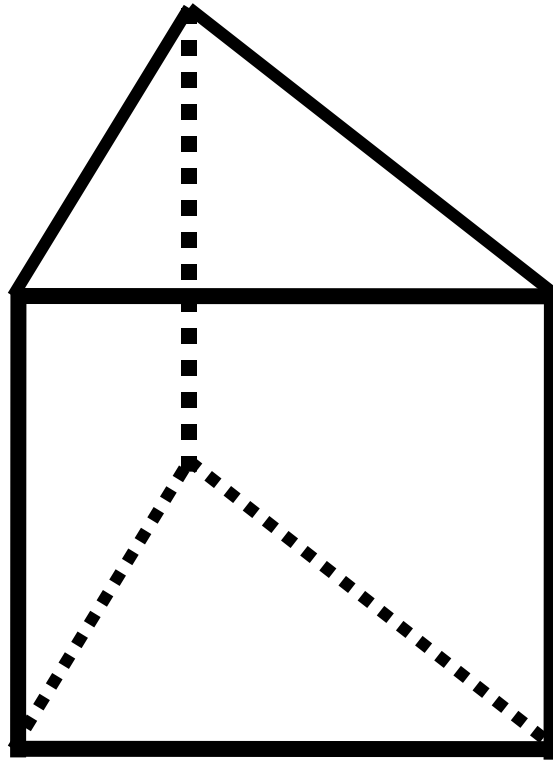## 1) Find the surface area

6 cm

5 cm

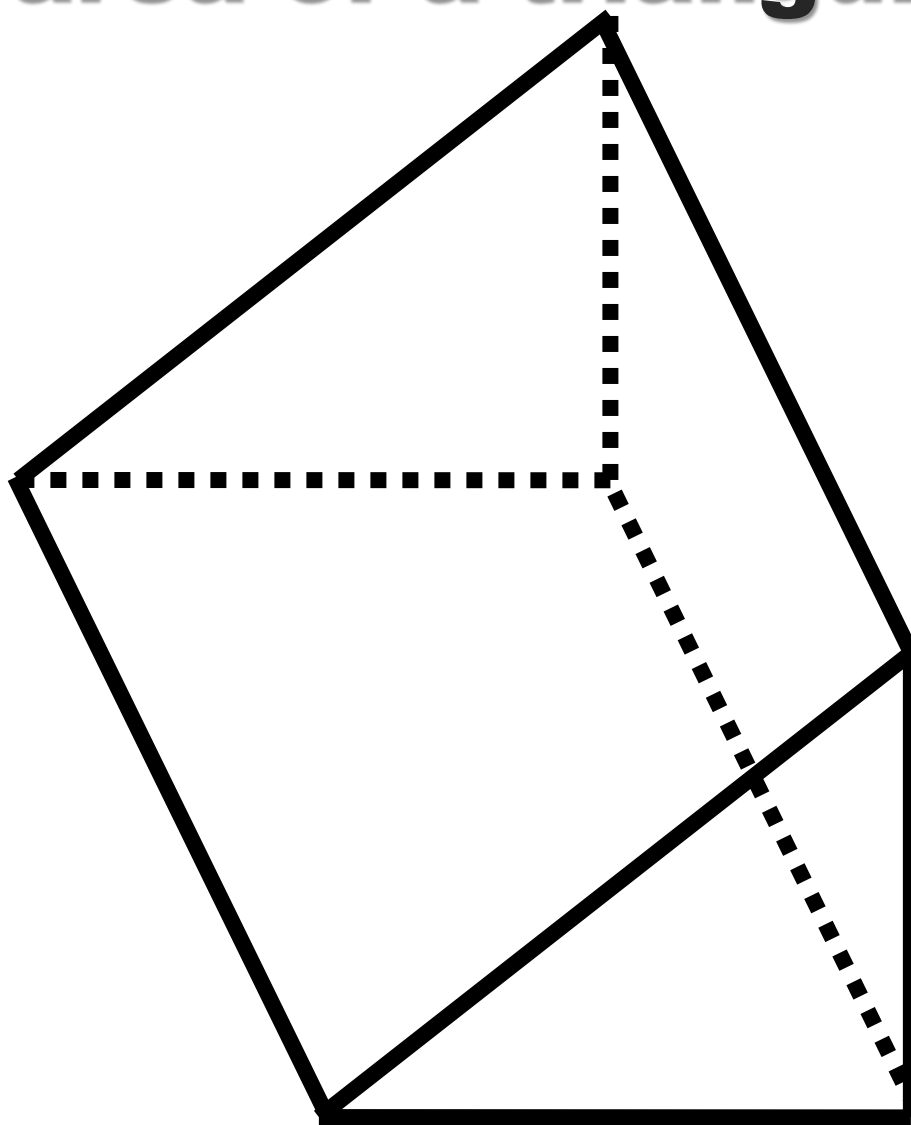9 cm

2) Find the surface area

9 cm
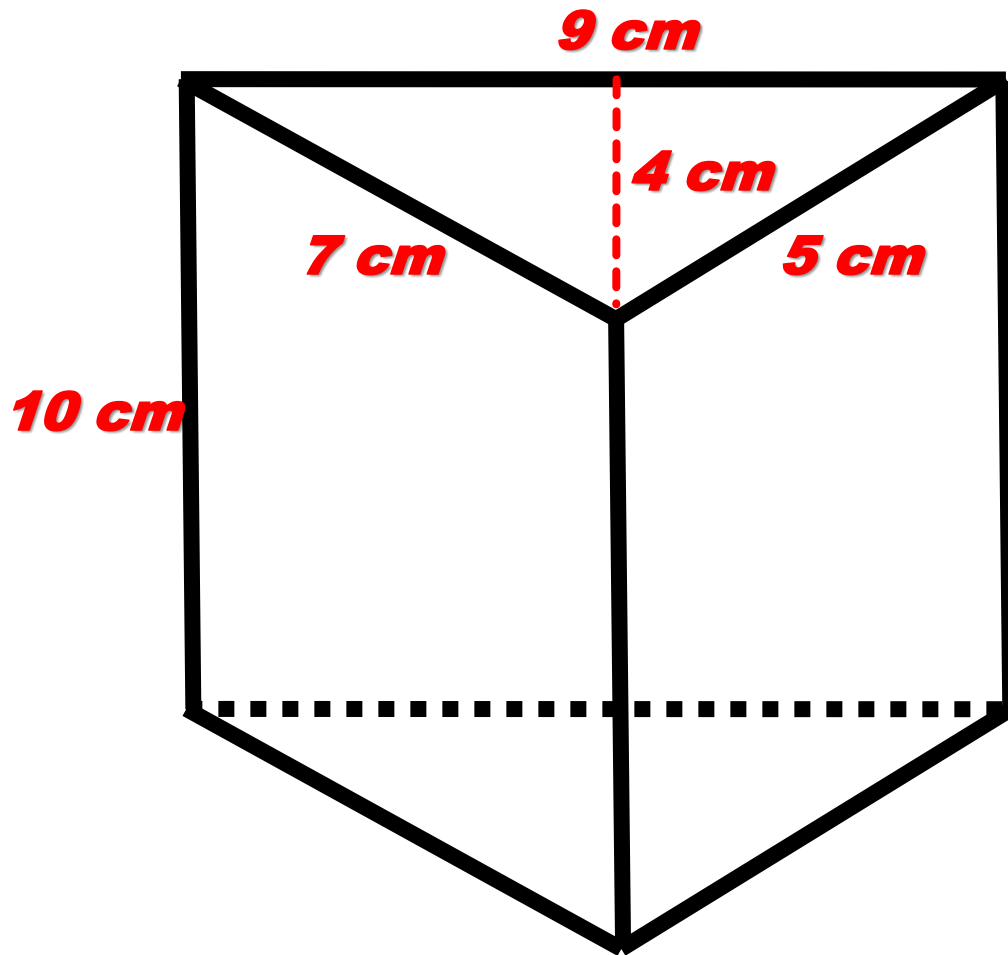
8 cm

7 cm

Surface area of a triangular prism

Surface area of a triangular prism

Surface area of a triangular prism

1) Find the surface area

2) Find the surface area

12 cm

15 cm

8 cm

10 cm