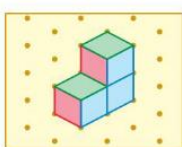# 8.1 Three-Dimensional Figures

Name _____

I can show how three dimensional figures can be made using two dimensional nets.

Notes:

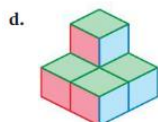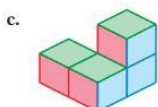a. Sample:

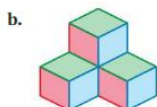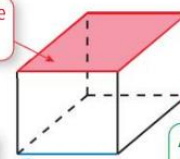Number of cubes: 3

b.   c.   d.

A **solid** is a three-dimensional figure that encloses a space. A **polyhedron** is a solid whose *faces* are all polygons.

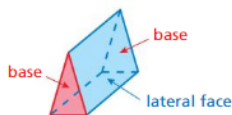A **face** is a flat surface of a polyhedron.

An **edge** is a line segment where two faces intersect.

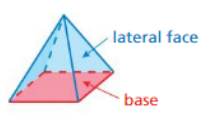A **vertex** is a point where three or more edges intersect.

Prisms

A **prism** is a polyhedron that has two parallel, identical *bases*. The *lateral faces* are parallelograms.

base
base
lateral face
Triangular Prism

Pyramids

A **pyramid** is a polyhedron that has one base. The lateral faces are triangles.

lateral face
base
Rectangular Pyramid

The shape of the base tells the name of the prism or the pyramid.

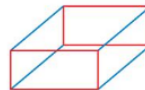a. **Draw a rectangular prism.**

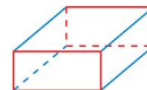Step 1:
Draw identical rectangular bases.

Step 2:
Connect corresponding vertices.

Step 3:
Change any *hidden* lines to dashed lines.

b. **Draw a triangular pyramid.**

Step 1:
Draw a triangular base and a point.
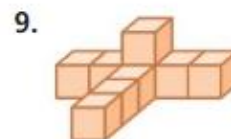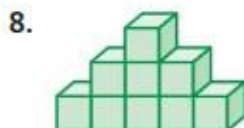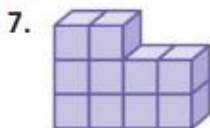
Step 2:
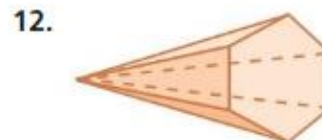Connect the vertices of the triangle to the point.

Step 3:
Change any *hidden* lines to dashed lines.

- -

Draw the front, side, and top views of the stack of cubes. Then find the number of cubes in the stack.

7.   8.   9.

Find the number of faces, edges, and vertices of the solid.

10.   11.   12.

Draw the solid.

13. triangular prism

14. pentagonal prism

15. rectangular pyramid

16. hexagonal pyramid