16.1

Fill in the blank to form a true statement.

a) A rectangle would be a square if:

_____

b) A trapezoid would be a parallelogram if:

_____

c) A parallelogram would be a rectangle if:

_____

16.2/16.3

Fill in the blank with the word "always," "sometimes," or "never." If a statement is sometimes true, sketch and label examples of when it is true and when it is not true.

a) A right triangle is _____ an obtuse triangle.

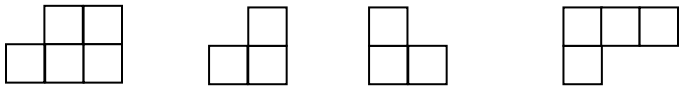
b) A parallelogram is _____ a rhombus.

c) A square is _____ a trapezoid.

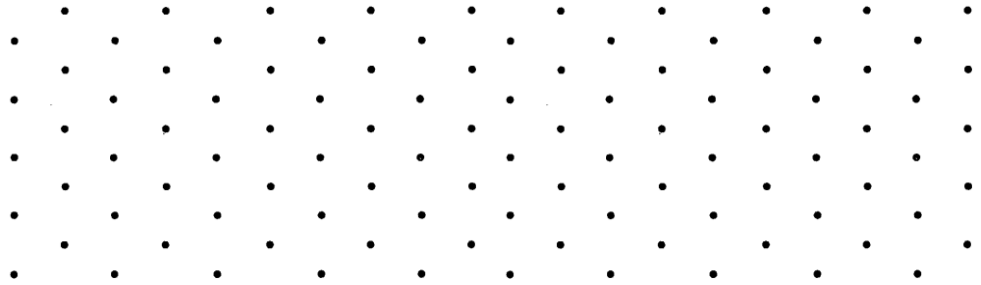
d) A scalene triangle is _____ a right triangle.

17.1

Draw the 3-D shape that has the given direct views.



Front view Right view Left view Top view from front



17.2

For an n-gon prism, determine the number of vertices, faces, and edges.

Vertices: _____ Faces: _____ Edges: _____

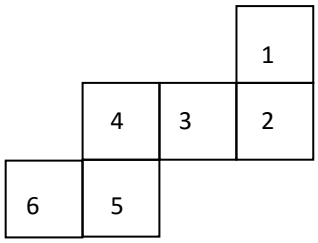
Demonstrate that your answers follow Euler's Formula.

17.3

Make a drawing of a right hexagonal prism.

Make a drawing of a polyhedron with 7 faces and 12 edges.

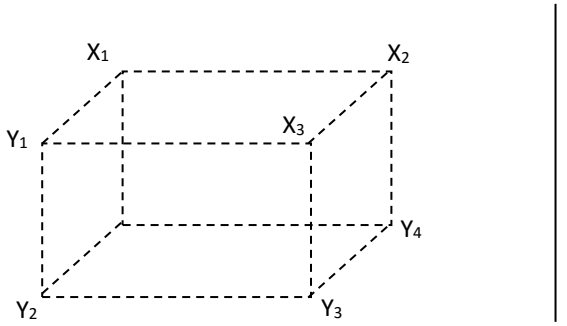
If the net were folded up to make a cube, which pairs of faces would be opposite each other?



_____ and _____ _____ and _____ _____ and _____

17.4

Sketch and label a chiral version of this "molecule."



17.5

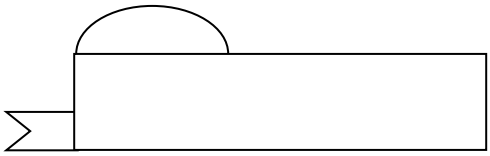
Name two characteristics that the five regular polyhedra (platonic solids) have in common.

1)

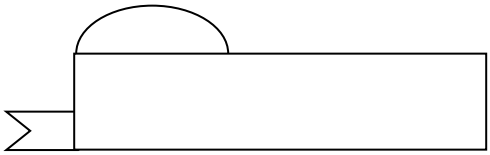
2)

18.1

Add to the following design so that it has a reflection symmetry. Draw in the line of symmetry.

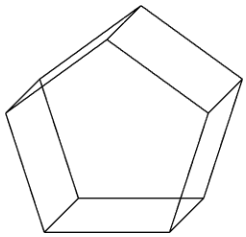


Now, add to the original design so that it has a rotational symmetry. Show the center of rotation.



18.2

Consider this right regular pentagonal prism. You may add to the drawing and/or include labels to help you with the required descriptions.



How many total reflection symmetries does the figure have? _____

Describe ONE plane of symmetry.

How many distinct rotational symmetries does the figure have? _____

Describe ONE axis of rotational symmetry and name the degrees of rotation for that axis.

Degrees of rotation: _____