Polyhedra : 3d Shape

Name:

Date:

Carry out the following investigation – you may use 3d shapes to help. Complete the table below and try to answer the questions.

Shape	faces	Vertices	Edges
Cube			
Cuboid			
Triangular Prism			
Hexagonal Prism			
Square Based Pyramid			
Tetrahedron			
Octahedron			
Dodecahedron			
Icosahedron			

Can you explain how to find the number of edges on a shape if you know the number of faces and vertices?

If a shape has 32 faces and 30 vertices – predict how many edges it will have.

Using your data can you predict the number of edges a rhombicosidodecrahedron has, if you know that it has 62 faces and 60 vertices?

Can you write a formula to show how to find the number of edges any 3d shape would have – prove it !!