Chapter 12

Lesson 2

Name _____ Date _____

Describing Three-Dimensional Figures

NCTM Standards 2, 3, 7, 8, 9, 10

1. Choose a three-dimensional figure and record its letter here: _____

   Describe the faces of your three-dimensional figure and tell if any faces appear to be *congruent*, *parallel*, or *perpendicular*.

_____

_____

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2. Complete the chart to show how many faces, vertices, and edges your three-dimensional figure has.

Faces	
Vertices	
Edges	

Add the number of faces and vertices:

F + V = _____

From that sum, subtract the number of edges:

F + V − E = _____

3 Find out what other students got as their answer for Problem 2. Are you surprised? Based on what you find out, write a sentence or two stating a possible conclusion about polyhedra.

4 Pick any prism. Choose one vertex of that prism. Count how many faces meet at that vertex.

A Is there any vertex of that prism at which a *different* number of faces meet? _____

B Would your answer be different if you chose a prism with a different base? Explain why. _____

5 Pick any pyramid that has one non-triangular face. Choose one vertex of that pyramid. Count how many faces meet at that vertex.

A Is there any vertex of that pyramid at which a *different* number of faces meet? _____

B Would your answer be different if you chose a pyramid with a different non-triangular base? Explain why. _____

6 **Challenge** Sketch one of the three-dimensional figures you used on this page.