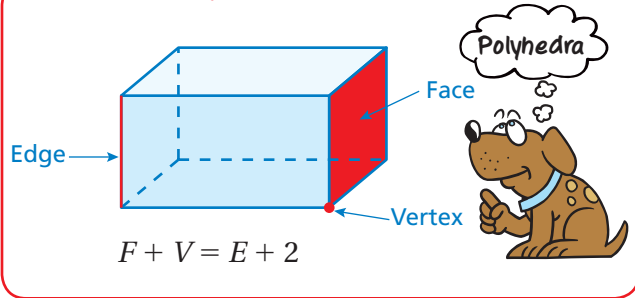


REVIEW: Faces, Edges, and Vertices

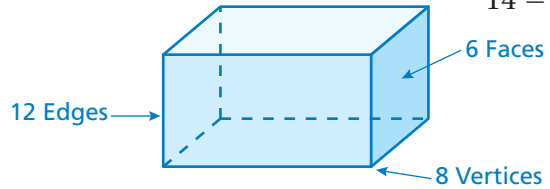
Name _____

Key Concept and Vocabulary



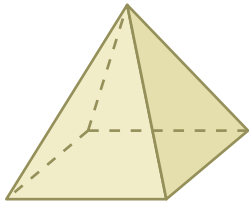
Visual Model

Rectangular Prism $F + V = E + 2$
 $6 + 8 = 12 + 2$
 $14 = 14$ ✓



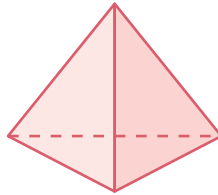
Skill Examples

1.



$F + V = E + 2$
 $5 + 5 = 8 + 2$

2.



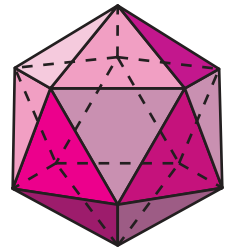
$F + V = E + 2$
 $4 + 4 = 6 + 2$

Application Example

3. How many vertices does an icosahedron have?

$F + V = E + 2$
 $20 + V = 30 + 2$
 $V = 12$

It has 12 vertices.



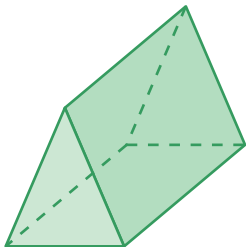
$F = 20$
 $E = 30$

PRACTICE MAKES PURR-FECT™

Check your answers at BigIdeasMath.com.

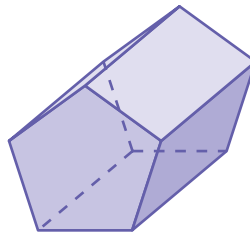
Find the number of faces, edges, and vertices.

4. Triangular Prism



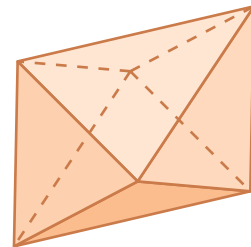
$F = \underline{5}, E = \underline{9}, V = \underline{6}$

5. Pentagonal Prism



$F = \underline{7}, E = \underline{15}, V = \underline{10}$

6. Octahedron



$F = \underline{8}, E = \underline{12}, V = \underline{6}$

Find the missing number of faces, edges, or vertices.

7. Dodecahedron

$F = 12, E = 30, V = \underline{20}$

8. Icosidodecahedron

$F = \underline{32}, E = 60, V = 30$

9. Octagonal Prism

$F = 10, E = \underline{24}, V = 16$

10. **SOCCER BALL** A soccer ball has the shape of a truncated icosahedron. It has 32 faces and 90 edges.

a. How many vertices does it have? 60

b. The vertices of an icosahedron are cut off to form the pentagons and hexagons seen on the soccer ball. How many of the faces are pentagons? 12

