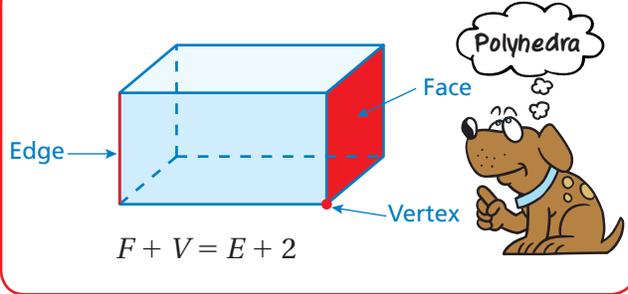


REVIEW: Faces, Edges, and Vertices

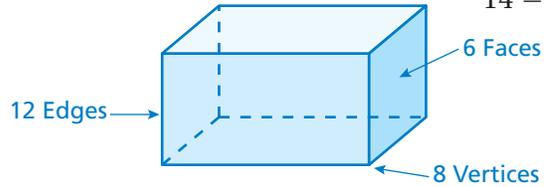
Name _____

Key Concept and Vocabulary



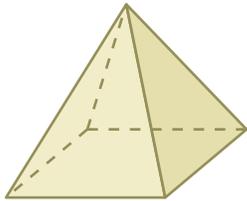
Visual Model

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



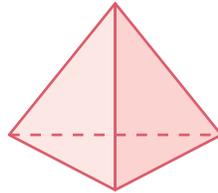
Skill Examples

1.



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

2.



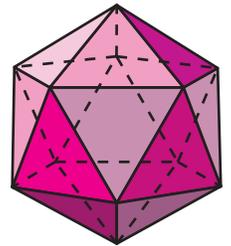
$F + V = E + 2$
 $4 + 4 = 6 + 2$

Application Example

3. How many vertices does an icosahedron have?

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

It has 12 vertices.



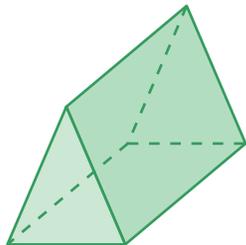
$F = 20$
 $E = 30$

PRACTICE MAKES PURR-FECT™

Check your answers at BigIdeasMath.com.

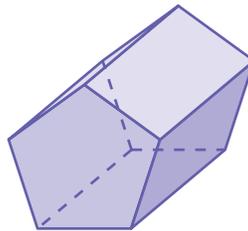
Find the number of faces, edges, and vertices.

4. Triangular Prism



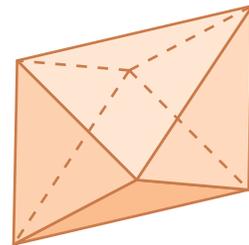
$F = \underline{\quad}, E = \underline{\quad}, V = \underline{\quad}$

5. Pentagonal Prism



$F = \underline{\quad}, E = \underline{\quad}, V = \underline{\quad}$

6. Octahedron



$F = \underline{\quad}, E = \underline{\quad}, V = \underline{\quad}$

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

7. Dodecahedron

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

8. Icosidodecahedron

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

9. Octagonal Prism

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

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

- How many vertices does it have? _____
- 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? _____

