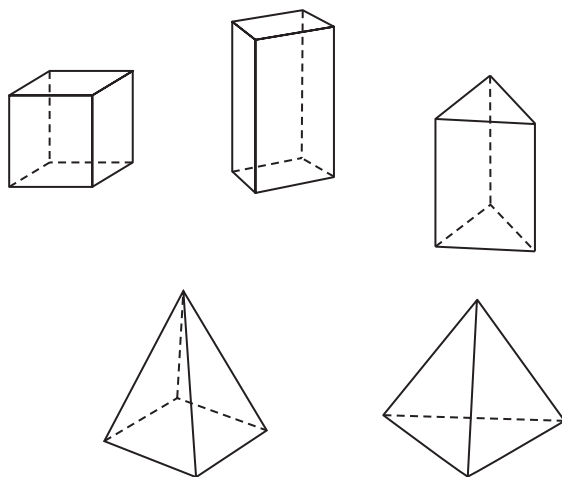


CHAPTER 14

Three-Dimensional Shapes

Lesson 14.1 Prisms and Pyramids



The flat surface of a solid is called a face.
Two faces meet at an edge.
Edges meet at a vertex.
The mathematical name for corners is vertices.



Complete the table.

	Solid	Number of Faces (F)	Number of Vertices (V)	Number of Edges (E)
1.	cube			
2.	rectangular prism			
3.	triangular prism			
4.	square pyramid			
5.	triangular pyramid			

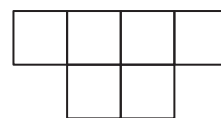
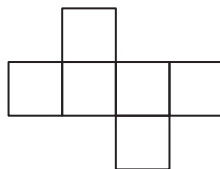
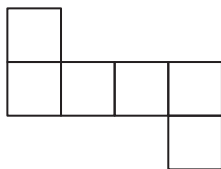
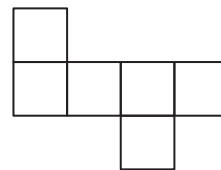
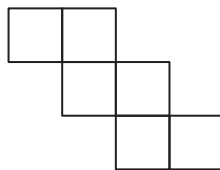
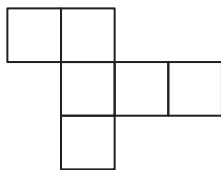
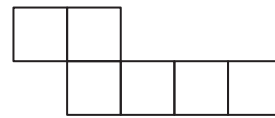
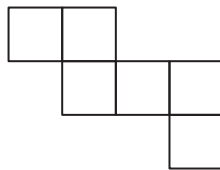
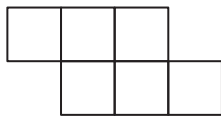
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Complete.

6. What general statement can you make about the number of faces, the number of vertices, and the number of edges of prisms and pyramids?

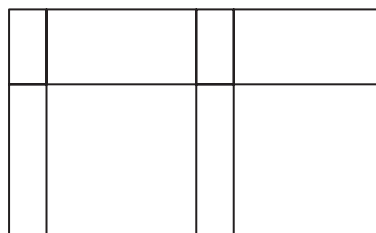
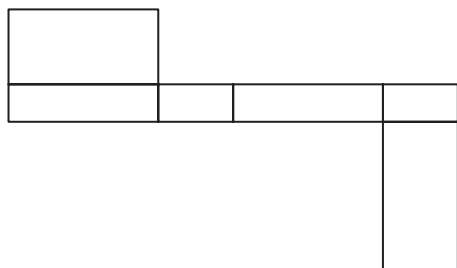
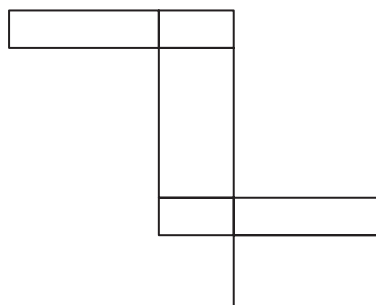
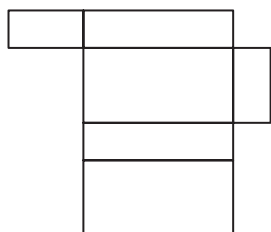
7. Which of these nets can be folded to form a cube?
Shade the circles that represent the correct answers.



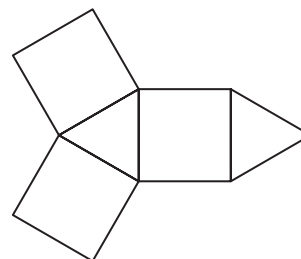
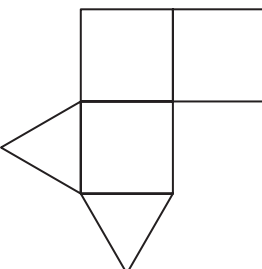
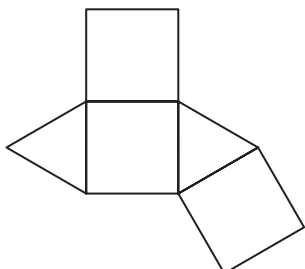
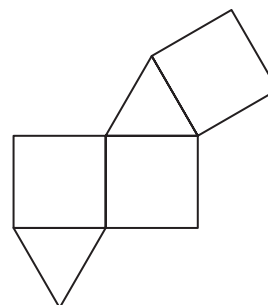
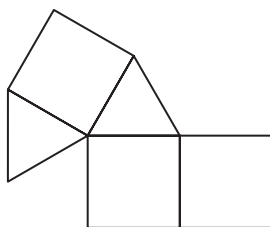
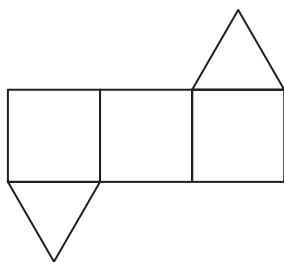
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8. Which of these nets can be folded to form a rectangular prism?
Shade the circles that represent the correct answers.



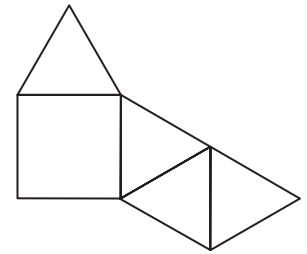
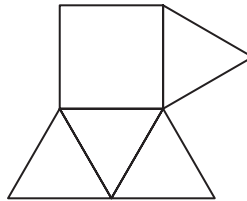
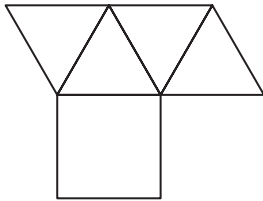
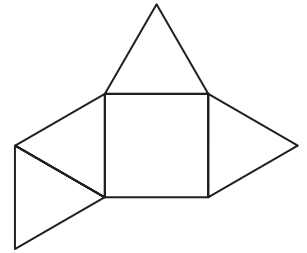
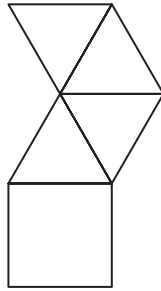
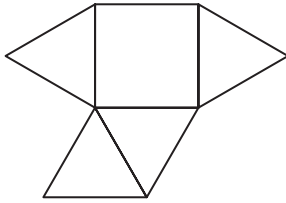
9. Which of these nets can be folded to form a triangular prism?
Shade the circles that represent the correct answers.



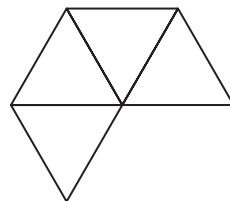
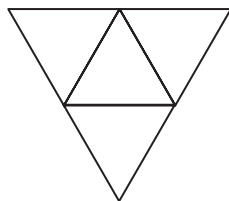
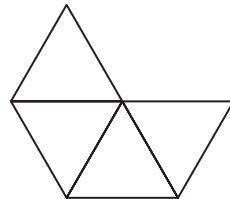
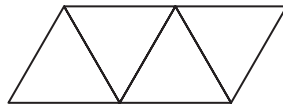
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- 10.** Which of these nets can be folded to form a square pyramid?
Shade the circles that represent the correct answers.



- 11.** Which of the nets can be folded to form a triangular pyramid? Shade the circles that represent the correct answers.



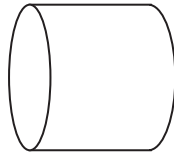
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Lesson 14.2 Cylinder, Sphere, and Cone

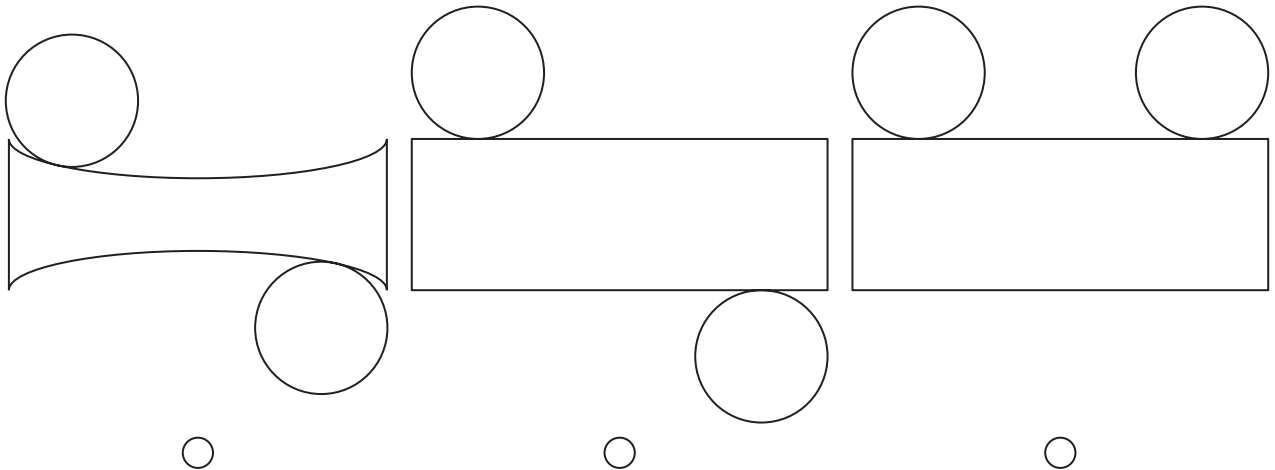
Complete.

1.

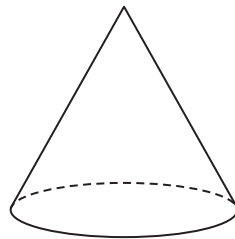


A cylinder has _____ congruent circular faces and _____ curved surface.

Which of these nets can be folded to form a cylinder? Shade the circle that represents the correct answer.



2.

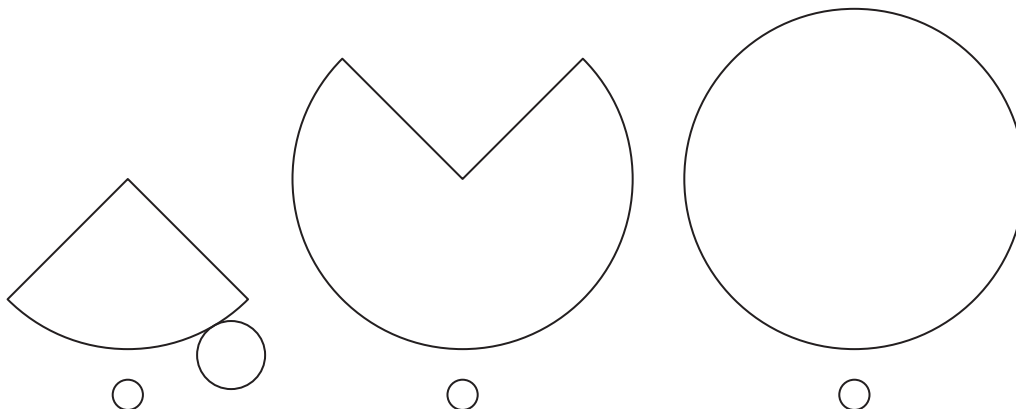


A cone has _____ curved surface.

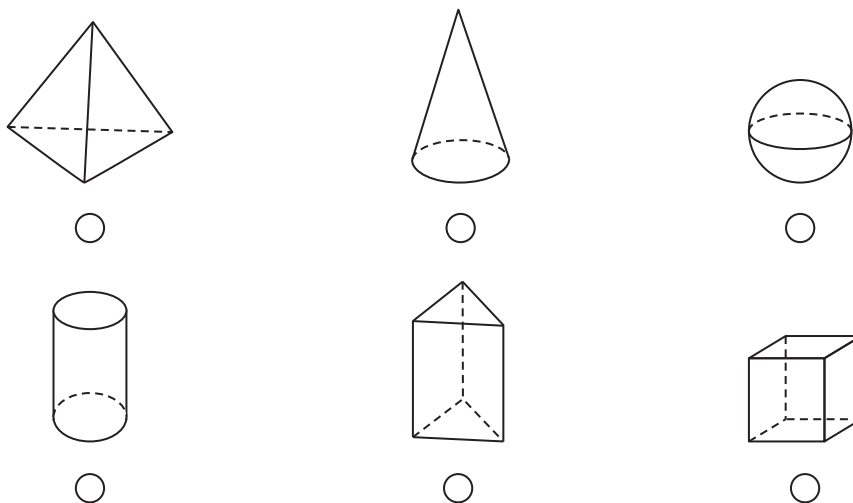
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Date: _____

Which of these nets can be folded to form a cone? Shade the circle that represents the correct answer.



3. Which of these three-dimensional figures have no vertices? Shade the circles that represent the correct answers.



Write T for True and F for False.

4. A pyramid has a curved surface. ()
5. A prism has two parallel bases. ()
6. A cone has three vertices. ()
7. A cube has triangular faces. ()
8. A cylinder has two parallel bases. ()
9. A sphere has a curved surface. ()

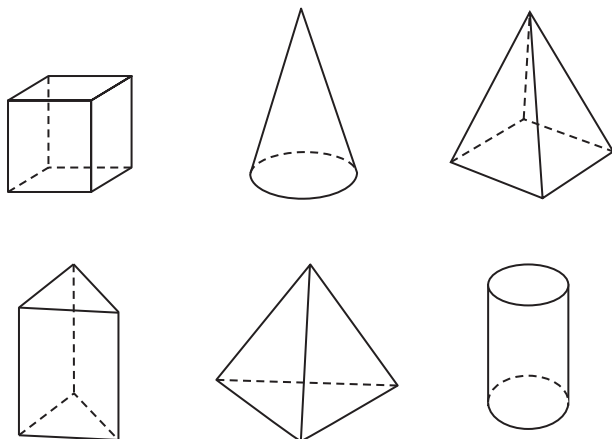
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Date: _____



Put on Your Thinking Cap!

Determine the number of faces, edges, and vertices each figure has.



The flat surface of a solid is called a face.
The line segment where two faces meet is an edge.
Edges meet at a vertex.



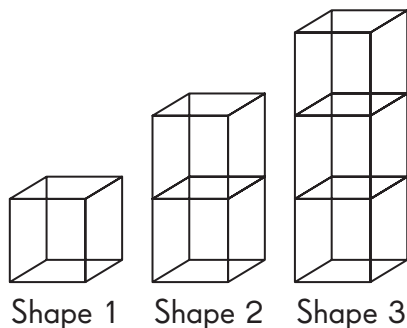
Complete the table.

	Solid	Number of Faces (F)	Number of Edges (E)	Number of Vertices (V)	$F + V - E$
1.	cube				
2.	cone				
3.	triangular prism				
4.	square pyramid				
5.	triangular pyramid				
6.	cylinder				

Name: _____

Date: _____

Identical sticks were used to form a series of vertical three-dimensional structures. The first three shapes are shown below.



Complete the table.

7.

Shape	Number of Cubes	Number of Sticks Used	Total Surface Area (length of each stick is 1 unit)
1	1	12	6
2	2	20	10
3	3	28	14
4	4	?	?
5	5	?	?

Solve. Show your work.

8. How many sticks are needed to form Shape 10?