



GeometryCoach.com

Nets and Drawings for Visualizing Geometry

Unit 1 Lesson 1

Students will be able to:

- Represent three-dimensional figures using nets.
- Make isometric and orthographic drawings.

Nets and Drawings for Visualizing Geometry

Key Vocabulary:

Net

Isometric drawing

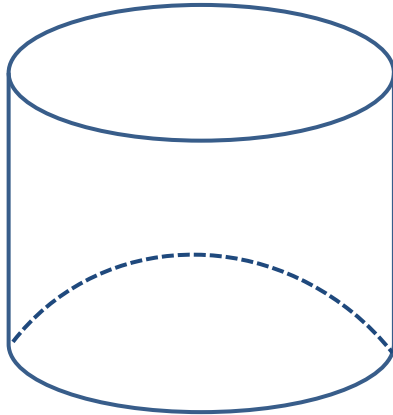
Orthographic drawing

Nets and Drawings for Visualizing Geometry

- A net is a two-dimensional diagram that you can fold to form a three-dimensional figure.
- A net shows all of the surfaces of a figure in one view.

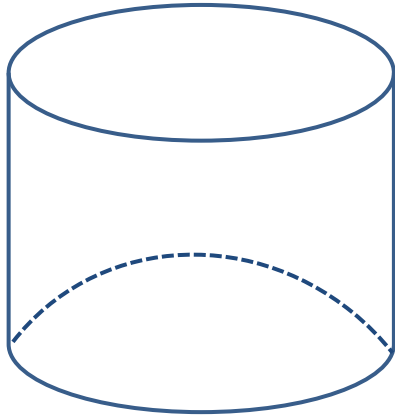
Sample Problem 1: Identify each figure as two-dimensional or three-dimensional.

a.



Sample Problem 1: Identify each figure as two-dimensional or three-dimensional.

a.



3-D
Cylinder

Sample Problem 1: Identify each figure as two-dimensional or three-dimensional.

b.



Sample Problem 1: Identify each figure as two-dimensional or three-dimensional.

b.

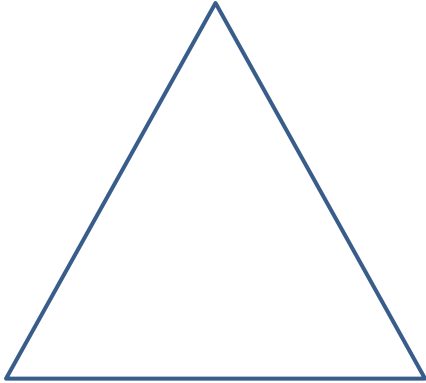


3-D

Rectangular Prism

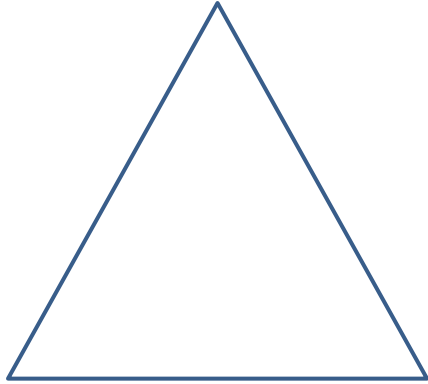
Sample Problem 1: Identify each figure as two-dimensional or three-dimensional.

c.



Sample Problem 1: Identify each figure as two-dimensional or three-dimensional.

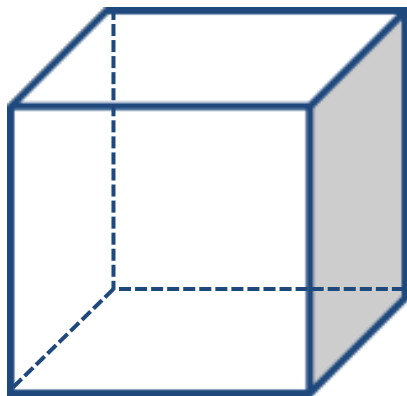
c.



**2-D
Triangle**

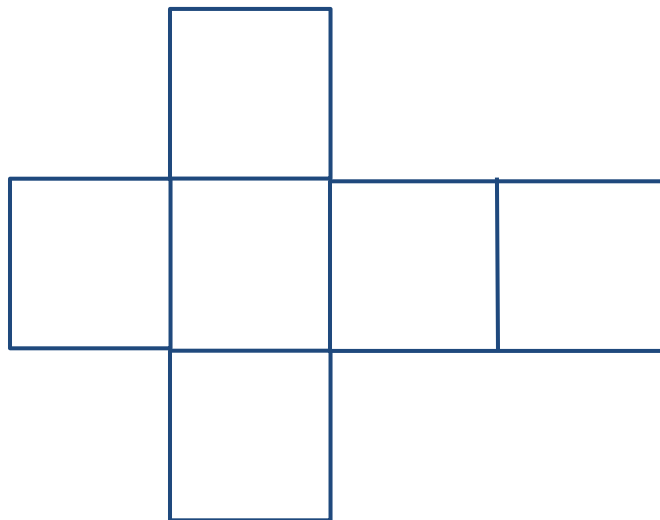
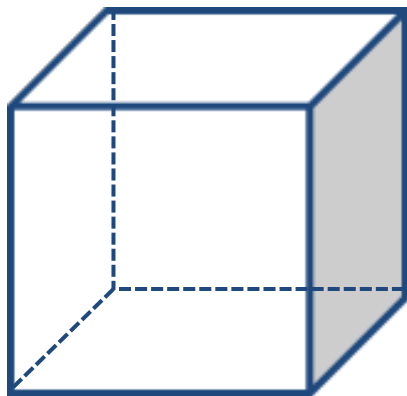
Sample Problem 2: Draw a net for each figure and then list what 2D shapes you would need to make each one.

a.



Sample Problem 2: Draw a net for each figure and then list what 2D shapes you would need to make each one.

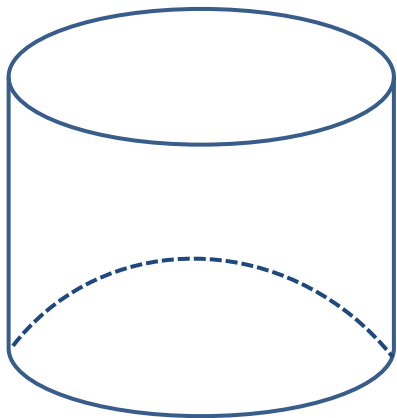
a.



6 squares

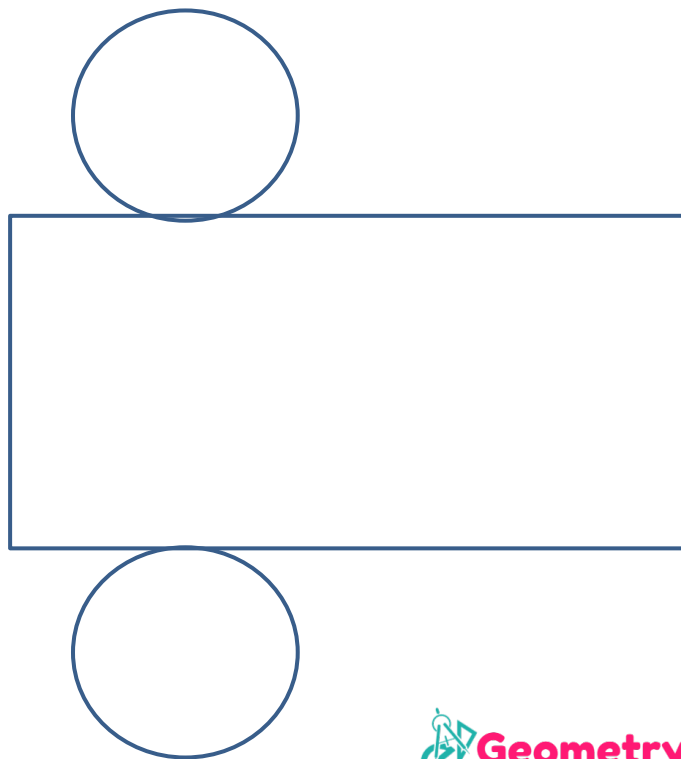
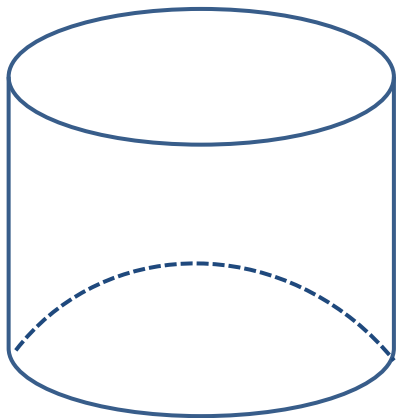
Sample Problem 2: Draw a net for each figure and then list what 2D shapes you would need to make each one.

b.



Sample Problem 2: Draw a net for each figure and then list what 2D shapes you would need to make each one.

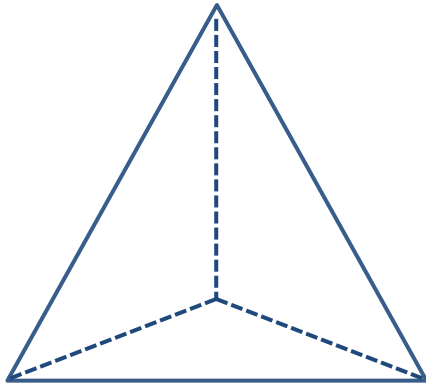
b.



2 circles and 1 rectangle

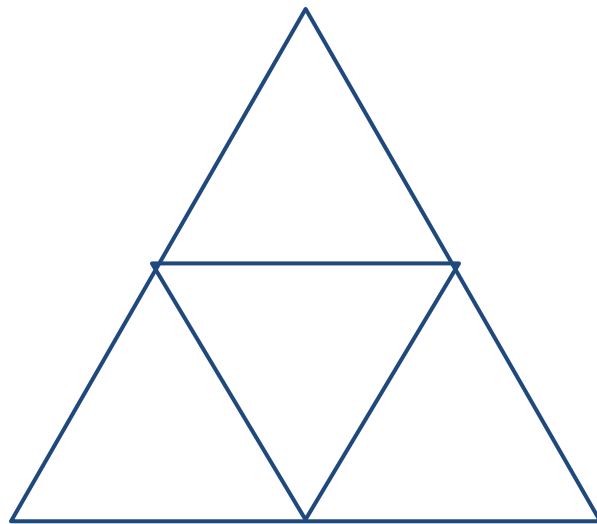
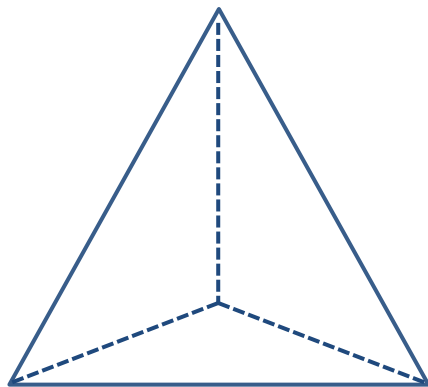
Sample Problem 2: Draw a net for each figure and then list what 2D shapes you would need to make each one.

C.



Sample Problem 2: Draw a net for each figure and then list what 2D shapes you would need to make each one.

C.

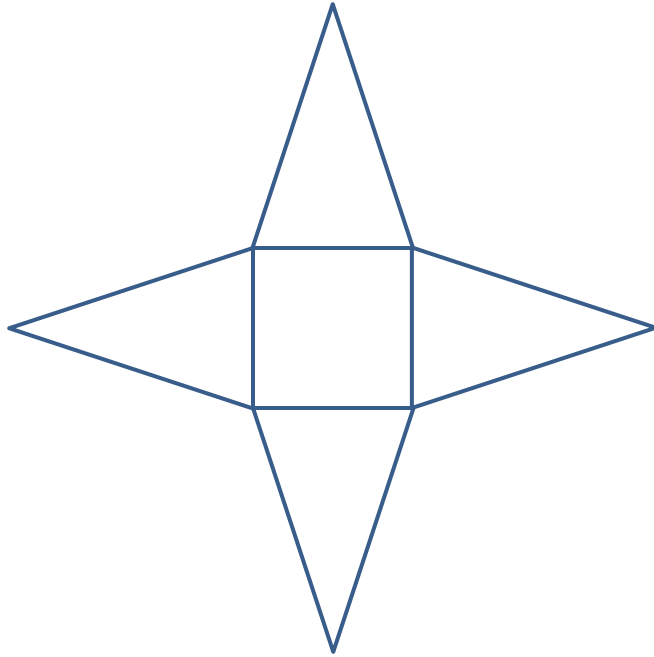


4 triangles



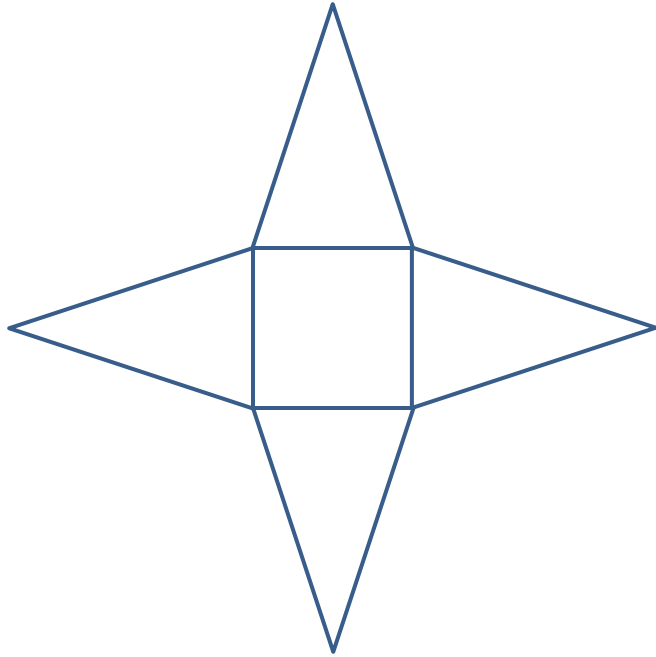
Sample Problem 3: : Name a three-dimensional figure that can be formed from each net.

a.



Sample Problem 3: : Name a three-dimensional figure that can be formed from each net.

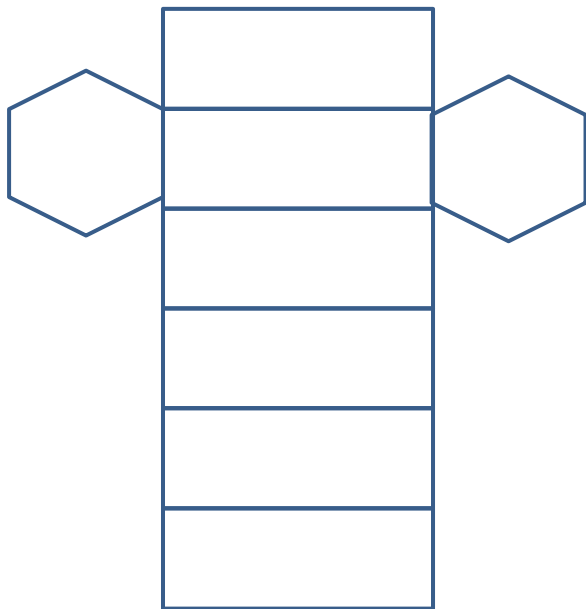
a.



Square Pyramid

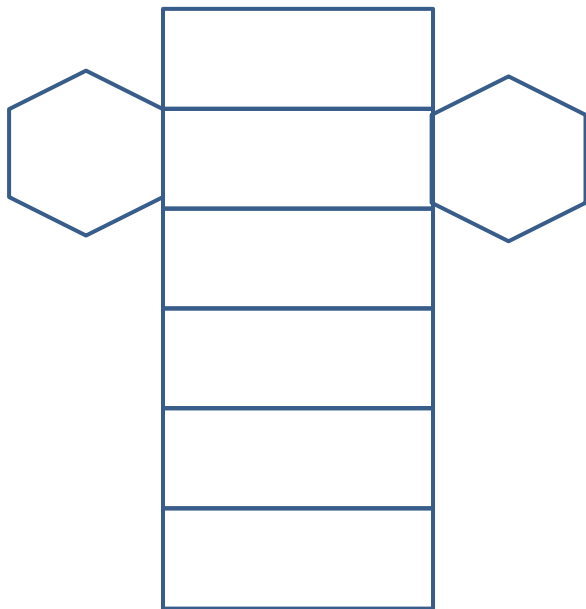
Sample Problem 3: : Name a three-dimensional figure that can be formed from each net.

b.



Sample Problem 3: : Name a three-dimensional figure that can be formed from each net.

b.



Hexagonal Prism

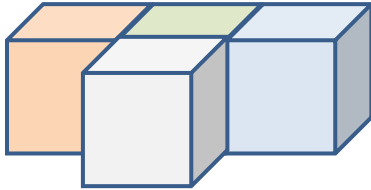
An isometric drawing

- An isometric drawing shows a corner view of a three-dimensional figure.
- You can draw an isometric drawing on isometric dot paper.



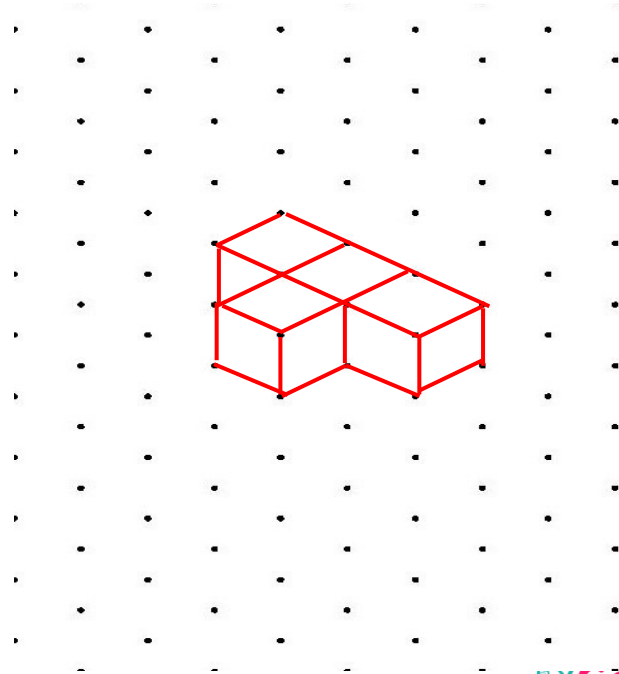
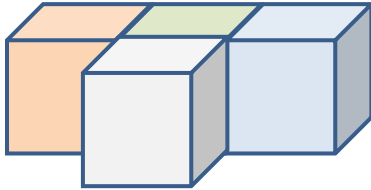
Sample Problem 4: Make an isometric drawing of each cube structure on isometric dot paper.

a.



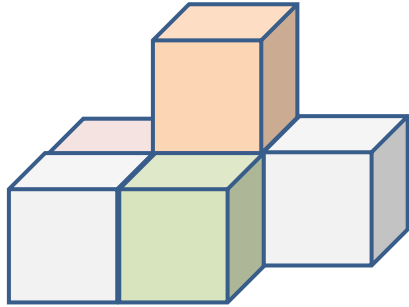
Sample Problem 4: Make an isometric drawing of each cube structure on isometric dot paper.

a.



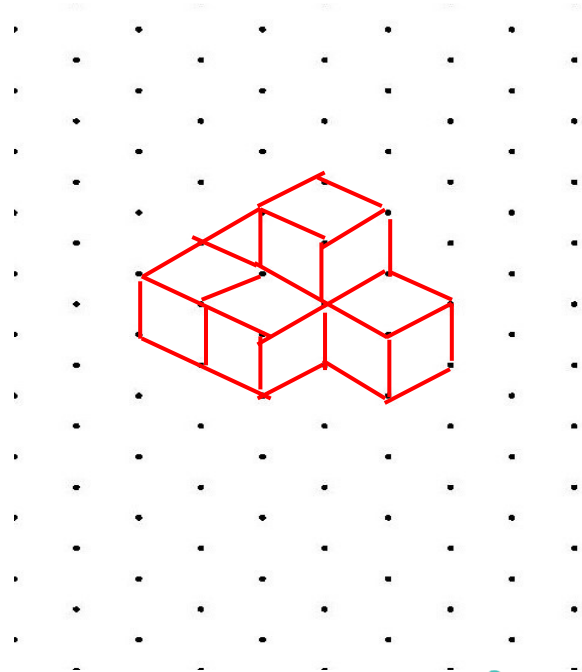
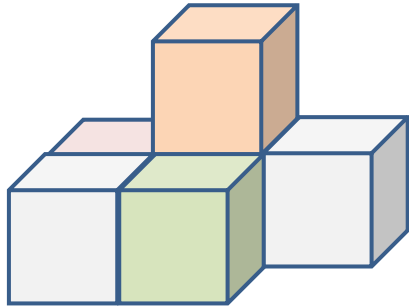
Sample Problem 4: Make an isometric drawing of each cube structure on isometric dot paper.

b.



Sample Problem 4: Make an isometric drawing of each cube structure on isometric dot paper.

b.



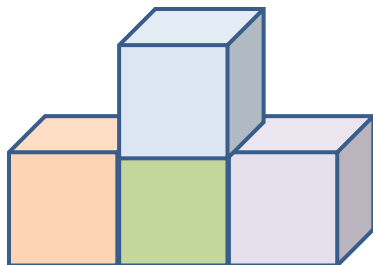
An orthographic drawing

- An orthographic drawing is another way to represent a three-dimensional figure.
- It shows a top view, front view, and right-side view.



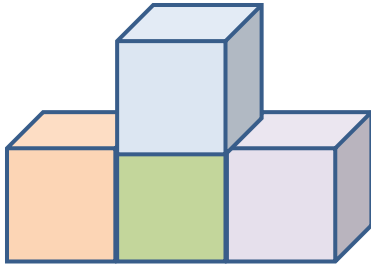
Sample Problem 5: Make an orthographic drawing for each structure.

a.



Sample Problem 5: Make an orthographic drawing for each structure.

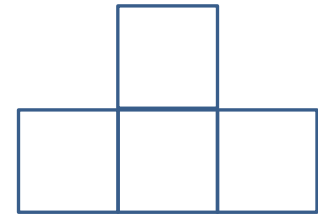
a.



Top view



Front view

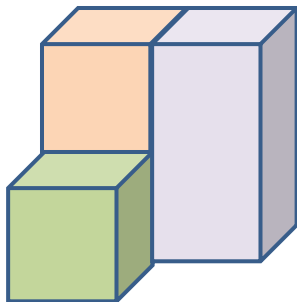


Right-side view



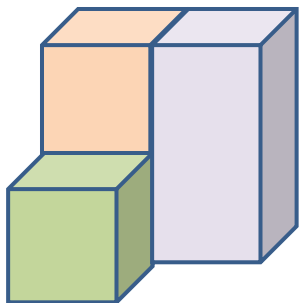
Sample Problem 5: Make an orthographic drawing for each structure.

b.

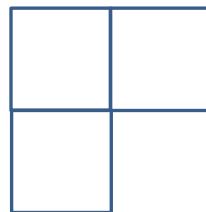


Sample Problem 5: Make an orthographic drawing for each structure.

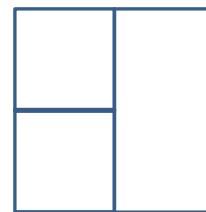
b.



Top view



Front view



Right-side view

