1.1 I can make nets and drawings of three-dimensional figures.

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P. 4-6
Vocab - put in own words or copy

Take Note

Cube
Cuboid
Square based pyramid
Cone
Triangular prism
Triangular based pyramid
Cylinder
Sphere
When you shine a flashlight on an object, you can see a shadow on the opposite wall. What shape would you expect the shadows in the diagram to have? Explain your reasoning.

**Essential Understanding** You can represent a three-dimensional object with a two-dimensional figure using special drawing techniques.

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.
Problem 1  Identifying a Solid From a Net

The net at the right folds into the cube shown beside it. Which letters will be on the top and front of the cube?

Front: C
Top: E

Got It? 1. The net in Problem 1 folds into the cube shown at the right. Which letters will be on the top and right side of the cube?

Top: E
Right: C
Problem 2  Drawing a Net From a Solid  STEM

Package Design  What is a net for the graham cracker box to the right? Label the net with its dimensions.

Got It?  2. a. What is a net for the figure at the right? Label the net with its dimensions.
        b. Reasoning  Is there another possible net for the figure in part (a)? If so, draw it.
An **isometric drawing** shows a corner view of a three-dimensional figure. It allows you to see the top, front, and side of the figure. You can draw an isometric drawing on isometric dot paper. The simple drawing of a file cabinet at the right is an isometric drawing.

A net shows a three-dimensional figure as a folded-out flat surface. An isometric drawing shows a three-dimensional figure using slanted lines to represent depth.

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**Problem 3 Isometric Drawing**

What is an isometric drawing of the cube structure at the right?
Got It?  3. What is an isometric drawing of this cube structure?

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

Although an orthographic drawing may take more time to analyze, it provides unique information about the shape of a structure.
Problem 4
Orthographic Drawing

What is the orthographic drawing for the isometric drawing at the right?

Got It? 4. What is the orthographic drawing for this isometric drawing?

Top:  
Front:  
Right:  
Hidden
Practice

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pick 2: #12-15
pick 2: #16-19
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