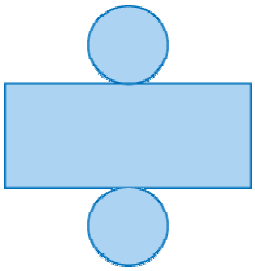
Lesson 10-2

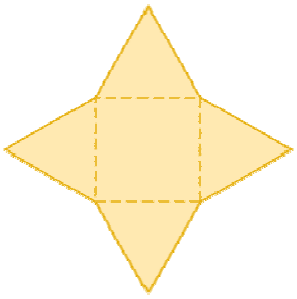
Example 1

What three-dimensional figure is represented by each net?

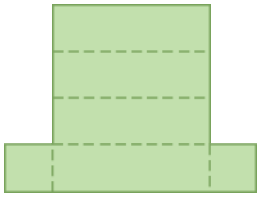
a.



b.



c.



Solution

Visualize each net being folded to form a three-dimensional figure.

a. This figure will have two parallel circular bases. It is a right cylinder.

b. This figure will have four triangular sides and a square base. It is a right square pyramid.

c. This figure will have four rectangular sides and two parallel square bases. It is a rectangular prism.

Example 2

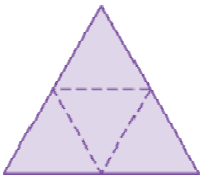
Draw a net for each three-dimensional figure.

a. a triangular pyramid

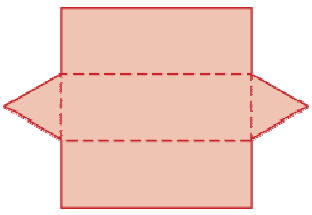
b. a triangular prism

Solution

a.



b.

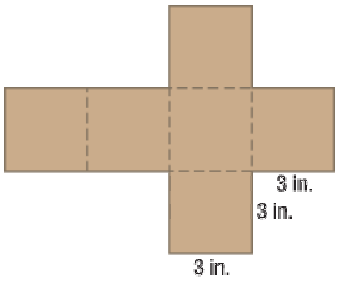


Example 3

HOBBIES Nathan is building some letter and number blocks for his niece. Each block is shaped like a cube with a side length of 3 in. How much paint would be needed to completely cover the surface of one of the blocks?

Solution

Draw the net for one of the blocks, and calculate the area of the six sides. Each side is a square with dimensions 3 in. by 3 in.



$A = 3 \text{ ☎ } 3 = 9 \text{ in}^2$

Multiply the area by 6 to find the total surface area of the block.

$SA = 6 \text{ ☎ } 9 = 54 \text{ in}^2$

Each block will require 54 in^2 of paint.