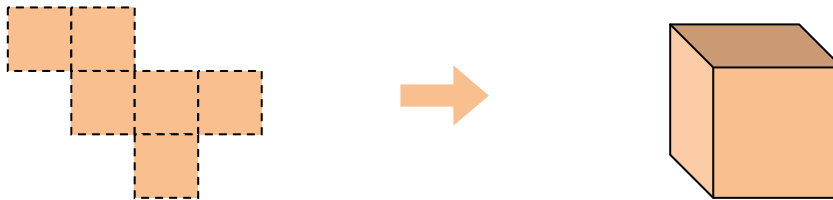Name _____   Date _____

Using Nets to Understand 3-D Figures - Guided Lesson Explanation

Explanation#1

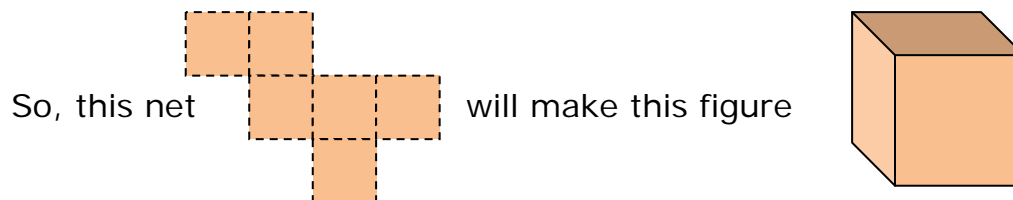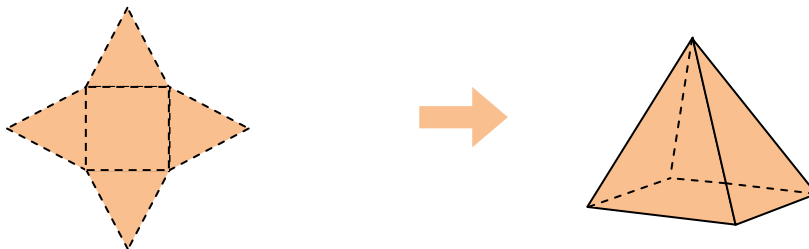Step 1) First we look to see what is being asked of us.

"Which net will make this figure?"

Step 2) We can fold a net to make a 3-dimensional figure.

Step 3) We will fold this net along the dotted lines. This net makes a cube. This is the correct net.

Step 4) We will fold this net along the dotted lines. This net makes a square pyramid. This is not the correct net.

So, this net   will make this figure
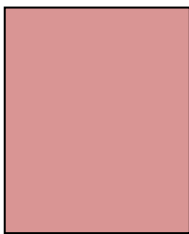
Explanation#2

Step 1) First we look to see what is being asked of us.

"Which net will make this figure?"
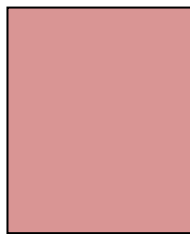
Step 2) We know that a regular prism has 3 pairs of identical faces. Each face is a rectangle.

Volume = length × width × height

Step 3) Now find the area of the faces in each pair.

7 × 5 = 35   7 × 5 = 35
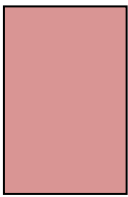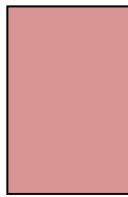
n × 7 = 7n   n × 7 = 7n

n × 5 = 5n   n × 5 = 5n

7 × 5 = 35   7 × 5 = 35

n × 7 = 7n   n × 7 = 7n

n × 5 = 5n   n × 5 = 5n

Step 3) We will add the 6 faces together to find the surface area.

$142 = 35 + 35 + 7n + 7n + 5n + 5n$

$= 70 + 24n$

Step 4) We will now solve for n.

$142 - 70 = 24n$

$72 = 24n$

$3 = n$

The rectangular prism is 3 inches long. Now we get the length, height, width.

Length: 7 in

Height: 4 in

Width: 3 in

Step 5) Now we will use these numbers in the volume formula.

Volume = Length x Height x Width

$= 7 \times 5 \times 3$

$= 105$
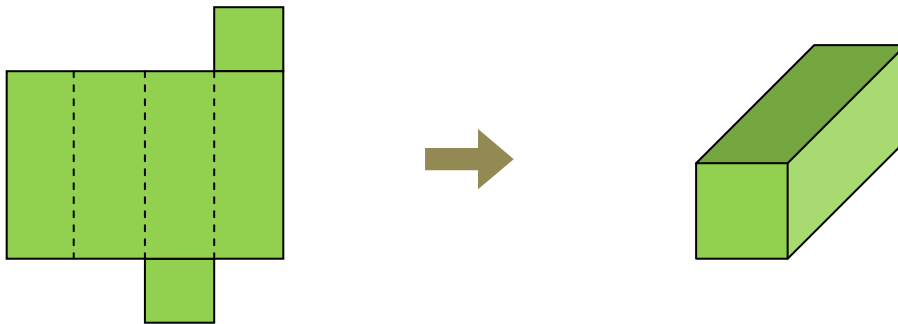
So, the volume is 105 cubic inches.

Explanation#3

Step 1) First we look to see what is being asked of us.

"What shape will this net make?"

Step 2) We can fold a net to make a 3-dimensional figure.

Step 3) We will imagine folding this net so that two edges of the rectangle each wrap around a circle.

So, this net makes a rectangular prism.