

April 20, 2015^{4th}
Starter

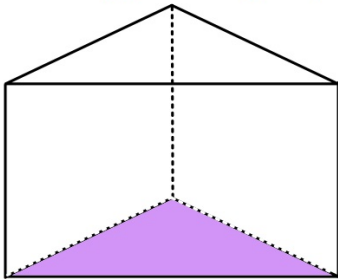
Catchup

4/20 - 3D Figures and Nets

Figures are named by using the **base shape** and then determining what is happening with the vertical sides.

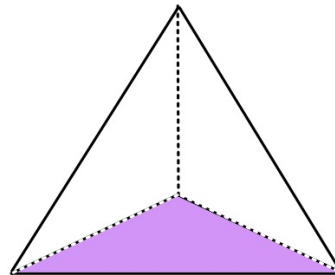
If the sides go straight up, it is a **prism**.

Triangular prism



If the sides go up to meet at a point, it is a **pyramid**.

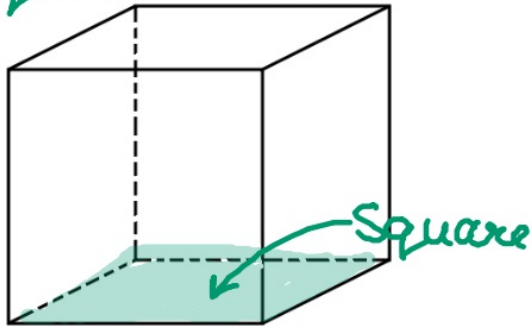
Triangular Pyramid



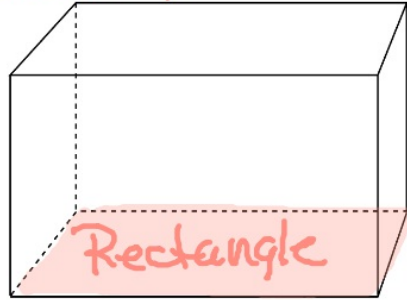
Dotted lines mean they cannot be seen from the given direction.

Find each base shape then name each figure.

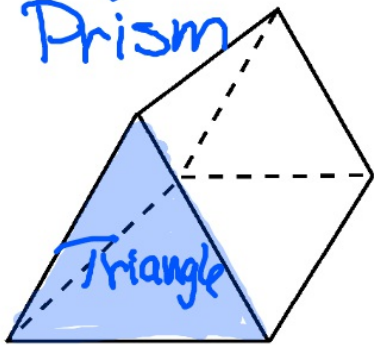
Square Prism



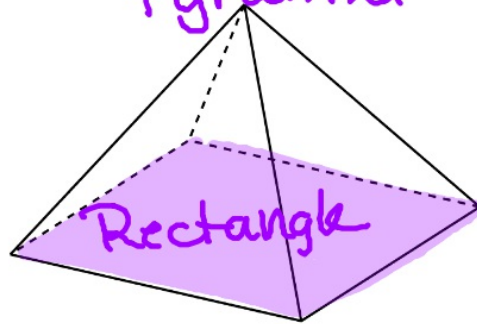
Rectangular Prism



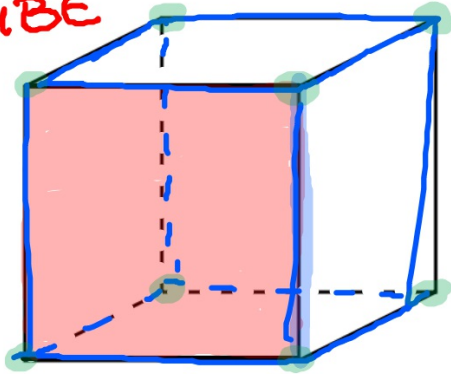
Triangular Prism



Rectangular Pyramid



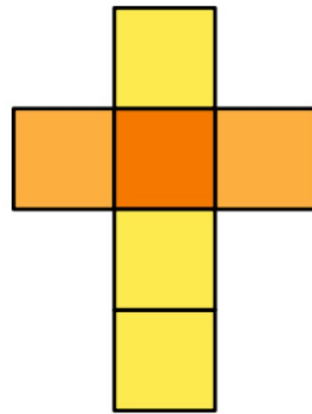
CUBE



Faces: 6
Flat shapes

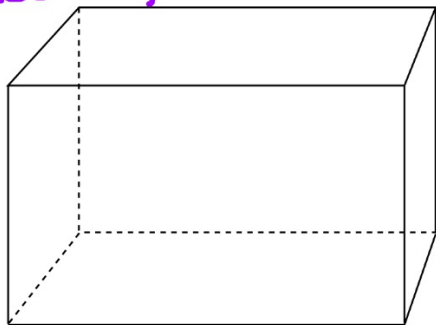
Edges: 12
Line where faces meet

Vertices: 8
Point where 2 edges meet



Draw a **net** for the figure
(a two-dimensional
representation of what it
would look like torn apart
and lying flat)

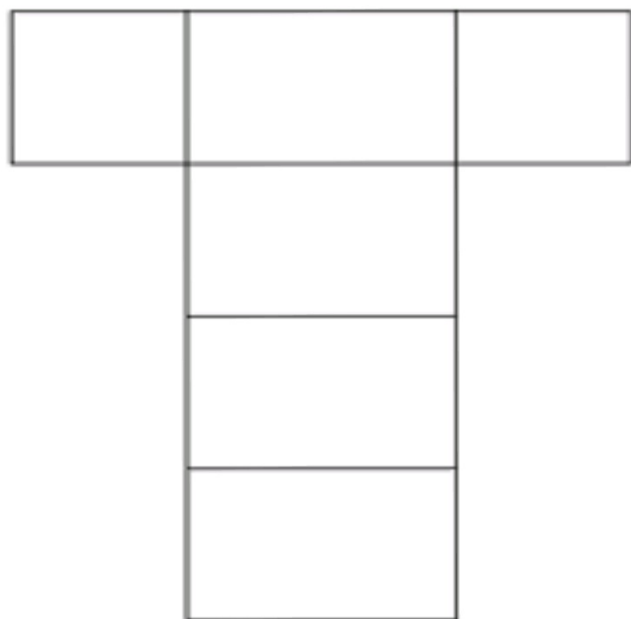
Rectangular Prism



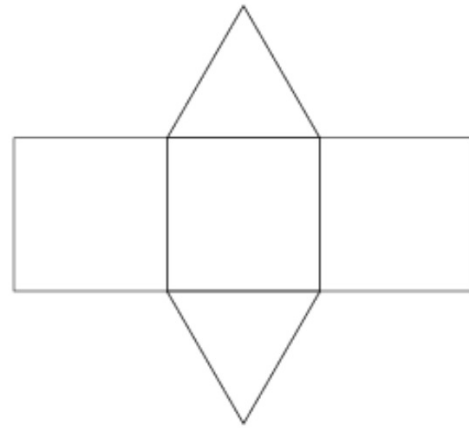
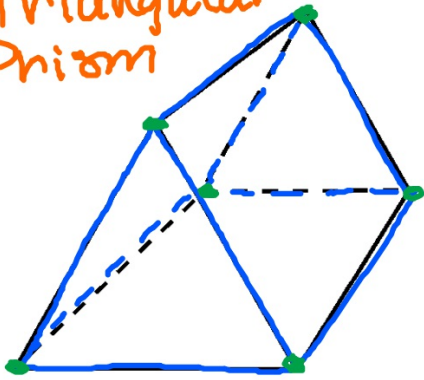
Faces: 6

Edges: 12

Vertices: 8



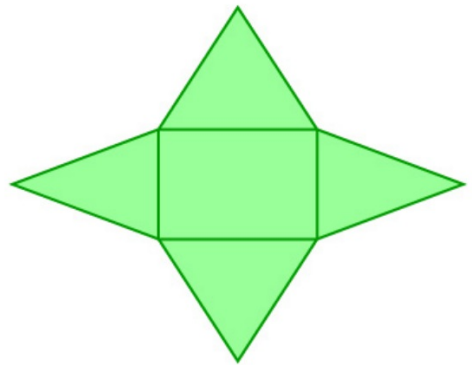
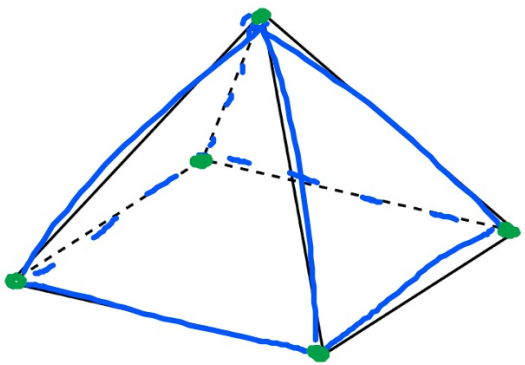
Triangular
Prism



Faces: 5
2 Δ 's and 3 \square 's

Edges: 9

Vertices: 6

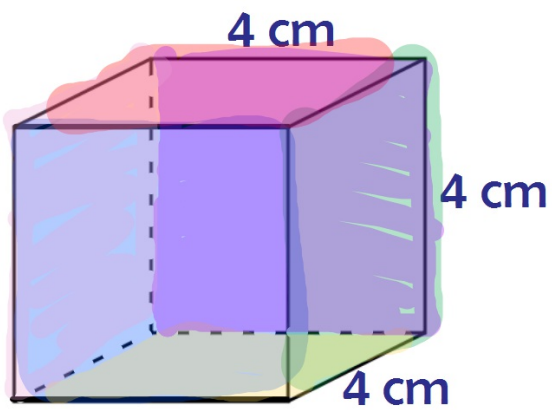


Faces: 5
4 Δ 's 1 \square

Edges: 8

Vertices: 5

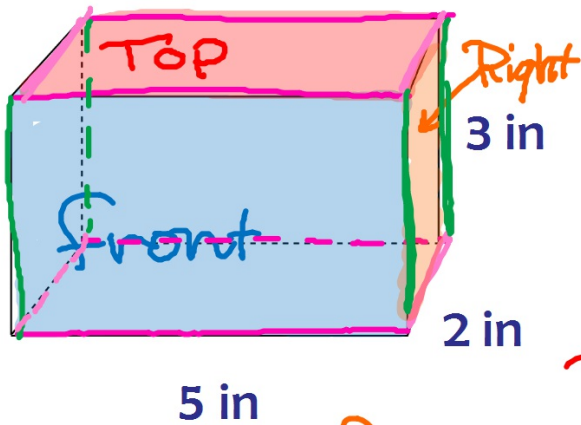
Find the **surface area** of each figure by finding the area of each surface (flat shape) and adding them up.



6 square surfaces

$$\begin{aligned} A &= LW \\ &= 4 \cdot 4 \\ &= 16 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} &16 \cdot 6 \\ &= 96 \text{ cm}^2 \end{aligned}$$



Front / Back

$$A = LW$$

$$= 5 \cdot 3$$

$$= 15 \text{ in}^2$$

Top / Bottom

$$A = LW$$

$$= 5 \cdot 2$$

$$= 10 \text{ in}^2$$

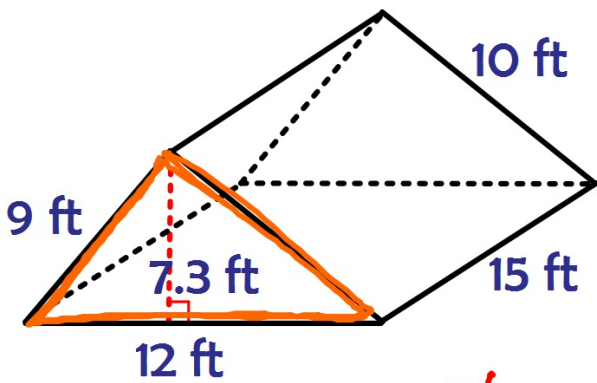
Right / Left

$$A = LW$$

$$= 3 \cdot 2$$

$$= 6 \text{ in}^2$$

$$\begin{array}{r}
 15 \\
 10 \\
 6 \\
 + 6 \\
 \hline
 62 \text{ in}^2
 \end{array}$$



Bottom	$A = LW = 15 \cdot 12 = 180 \text{ ft}^2$
Right	$A = LW = 15 \cdot 10 = 150 \text{ ft}^2$
Left	$A = LW = 15 \cdot 9 = 135 \text{ ft}^2$
Front	$A = \frac{1}{2}bh = \frac{1}{2} \cdot 12 \cdot (7.3) = 43.8 \text{ ft}^2$
Back	$A = \frac{1}{2}bh$
	$+ = 43.8 \text{ ft}^2$ <hr/> 552.6 ft^2

Homework

Due