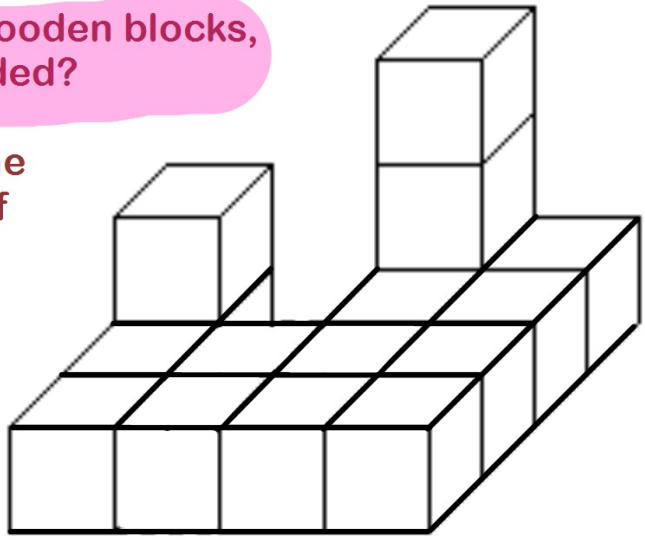
April 16, 2015

1st
2nd

Starter

If this figure was made out of wooden blocks, how many blocks would be needed?



If just the outside surfaces of the figure was painted, how many of the blocks would have:

a. one face painted?
b. two faces painted?
c. three faces painted?
d. four faces painted?
e. five faces painted?
f. six faces painted?

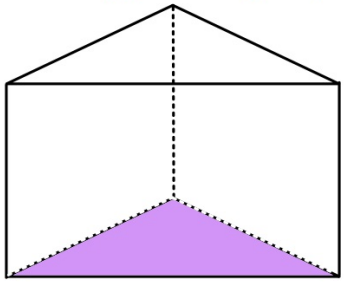
Catchup

4/16 - 3D Figures and Nets

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

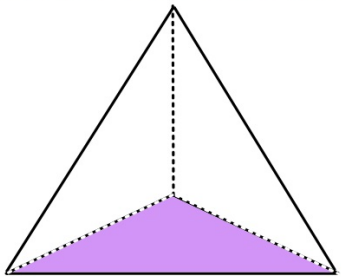
If the sides go straight up, it is a **prism**.

Triangular prism



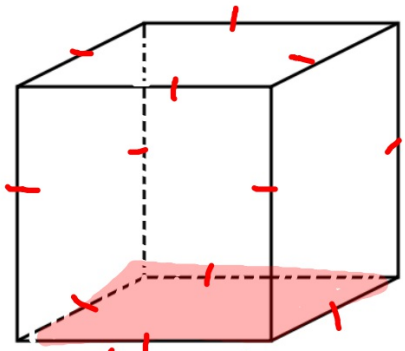
If the sides go up to meet at a point, it is a **pyramid**.

Triangular Pyramid

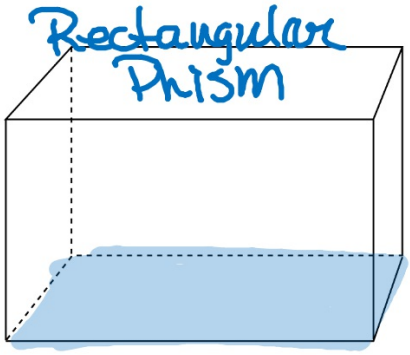


Dotted lines mean they cannot be seen from the given direction.

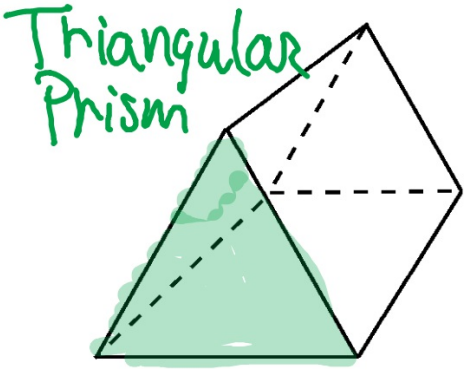
Find each base shape then name each figure.



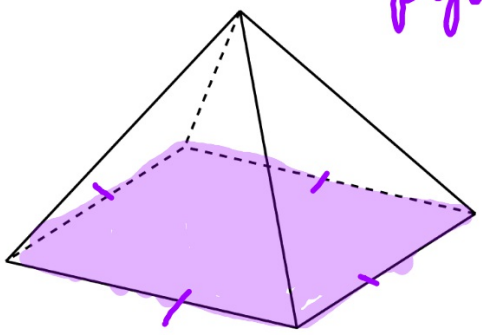
Cube ⇒ Square prism



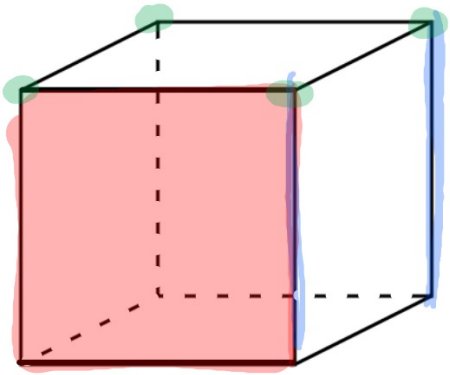
Rectangular Prism

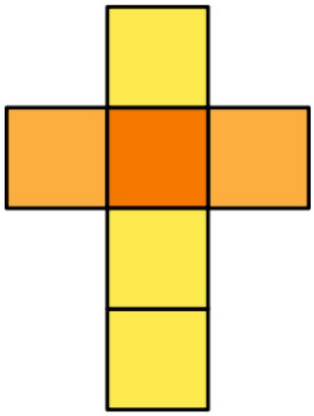


Triangular Prism



Square pyramid



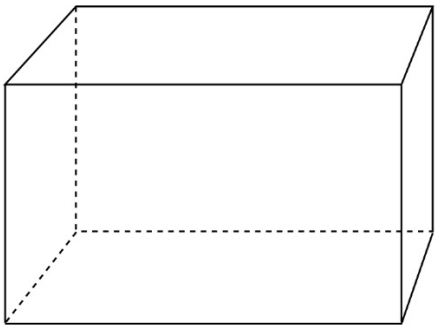


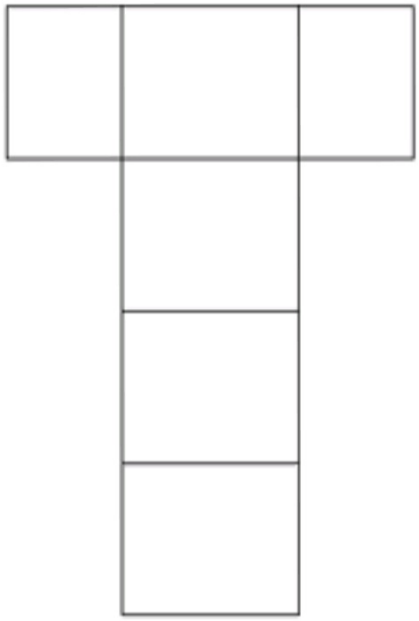
(polygons)
Faces: 6

(lines where faces meet)
Edges: 12

(points where edges meet)
Vertices: 8

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

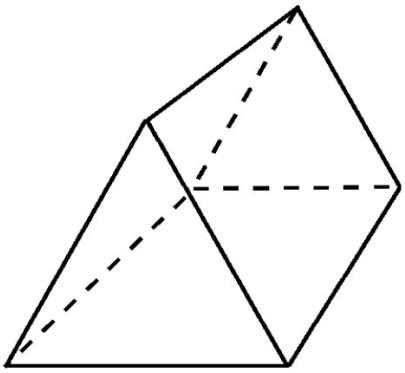


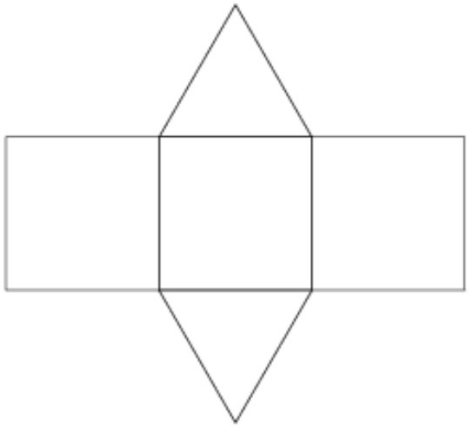


Faces: 6

Edges: 12

Vertices: 8

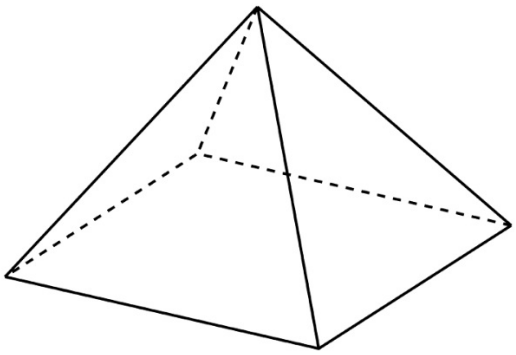


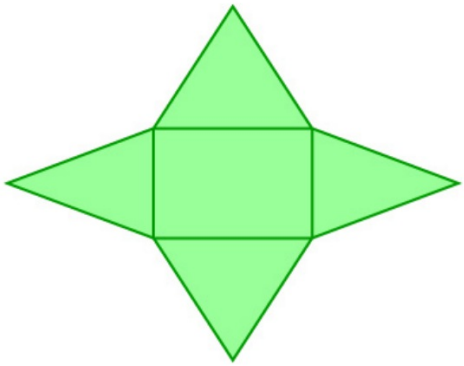


Faces: 5

Edges: 9

Vertices: 6



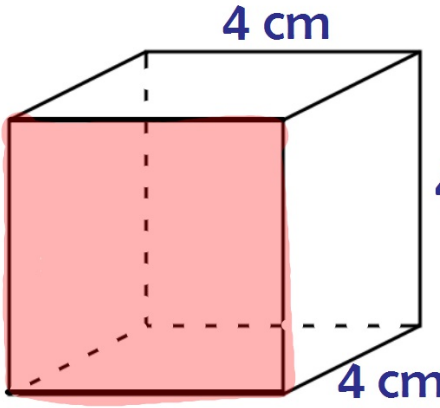


Faces: 5

Edges: 8

Vertices: 5

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



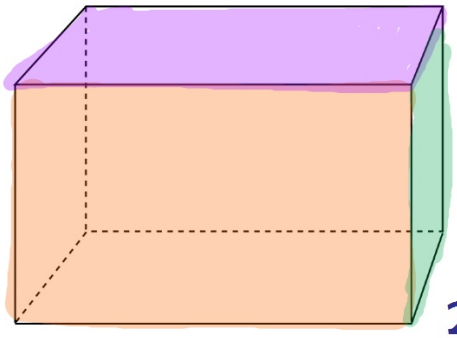
Front = Square
Back
Left
Right
Top
Bottom

$SA = 6s^2$

$= 6 \cdot 4^2$

$= 6 \cdot 16$

$= 96 \text{ cm}^2$



Front/Back

$2LW = 2(5)(3) = 30\ in^2$

Top/Bottom

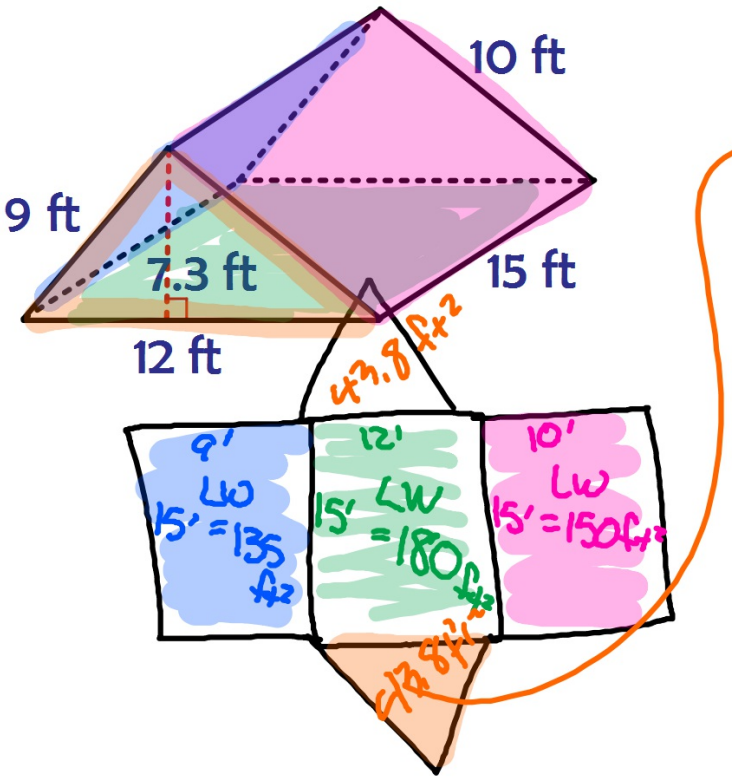
$2LW = 2(5)(2) = 20\ in^2$

Right/Left

$2LW = 2(3)(2) = 12\ in^2$

$+$

$62\ in^2$



$A = \frac{1}{2}bh$

$= \frac{1}{2}(12)(7.3)$

$= 43.8\ ft^2$

$SA = 135 + 180 + 150 + 43.8 + 43.8$

$\approx 552.6\ ft^2$

HOMEWORK

Green WS 2 3D-FIGURES

DUE Monday