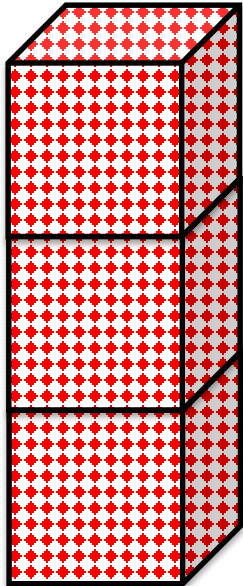


Do Now

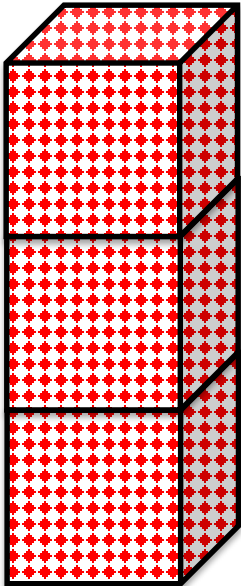
Three identical cubical boxes form a stack. It takes 350 square centimeters of wrapping paper to completely wrap the whole stack with no overlap.

Suppose each cube is wrapped separately and completely instead. What is the least amount of additional paper that is needed?



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The Great Pyramid at Giza in Egypt has a square base approximately 756 feet long. The height of each triangular face, called the slant height, is approximately 612 feet. What is the approximate surface area of the triangular faces of the Great Pyramid?



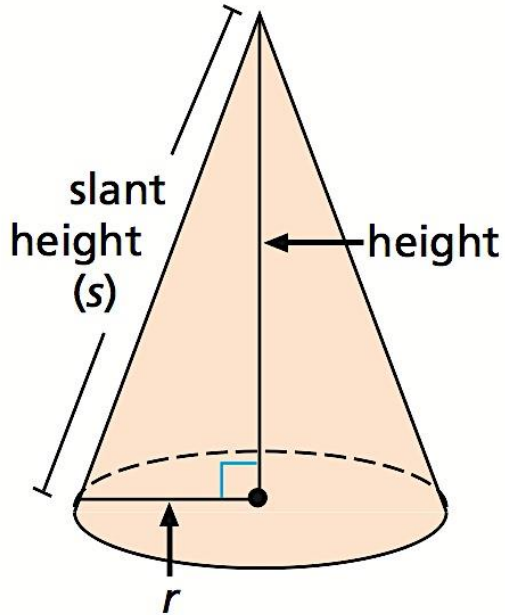
Consider the orange cone on your table. Work with your team to find a way to estimate the surface area of that cone.

A cone is a three-dimensional figure with a curved surface and one circular base. The height of a cone is the perpendicular distance from its vertex to its base. The slant height (s) of a cone is the perpendicular distance from its vertex to the edge of its base along the side of the cone.

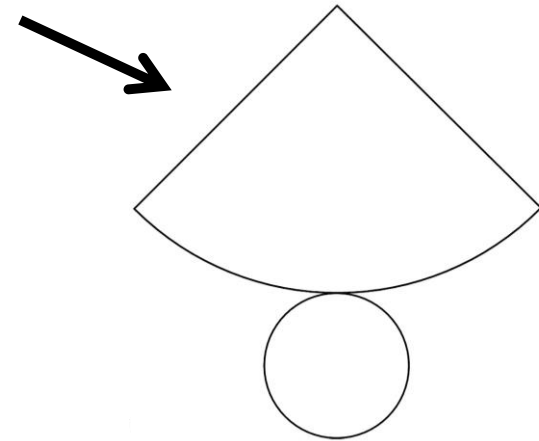
Surface Area of a Cone

$$SA = \pi r s + \pi r^2$$

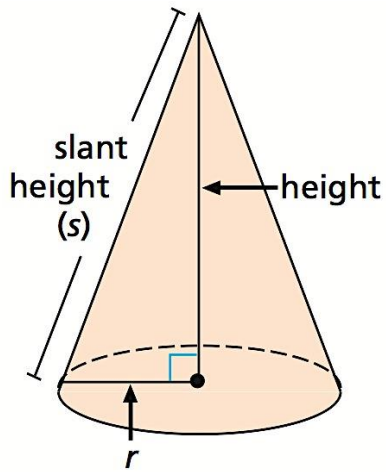
where r is the radius of the base and s is the slant height.



Net of a cone



What would we do if we knew the height, but not the slant height?



Surface Area of a Cone

$$SA = \pi rs + \pi r^2$$

where r is the radius of the base and s is the slant height.

Calculate the surface area of this cone.

