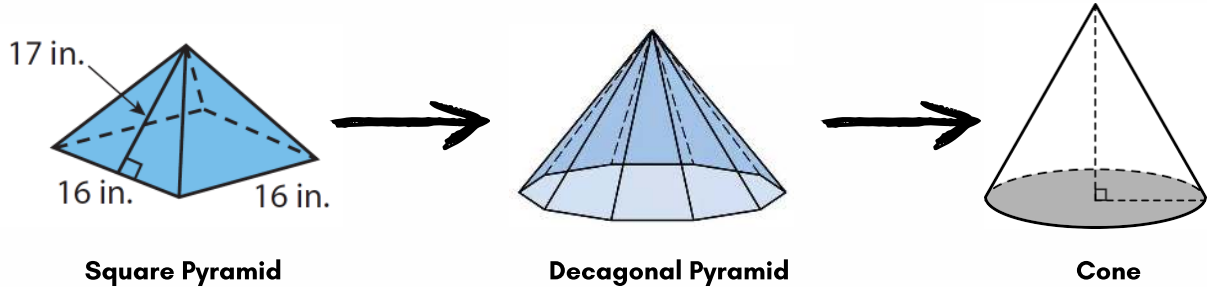


Surface Area-Cone

Concept

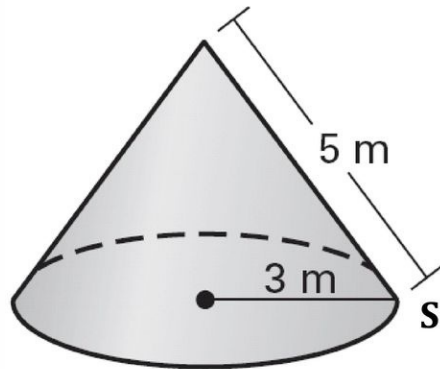
The surface area of a cone is the total area of its surface, the process of finding the surface area of a cone is similar to finding the surface area of a Pyramid. Think of a cone as a Pyramid with lots of sides creating lots of Triangles. See below 1/2



Surface area of Square Pyramid = Area of base + $\frac{1}{2} \times$ (Perimeter of base \times Height of triangle)
 Surface area of cone = Area of base + $\frac{1}{2} \times$ (Circumference of base \times Height of Slant)

The only difference is the base of each solid. One base is a square and the other is a circle. If you forgot, perimeter and circumference mean the same thing. They both mean the same distance around the outside of a shape.

Helpful Example



$$S = B + \frac{1}{2} Cl = \pi r^2 + \pi r l$$

$$r = 3$$

$$l = 5$$

$$S = \pi r^2 + \pi r l = \pi 3^2 + \pi(3)(5)$$

$$S = 9\pi + 15\pi = 24\pi$$

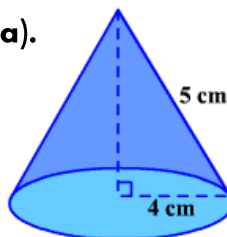
$$S \approx 75.398$$

Find the Surface Area of each cone.

1. Find the surface of a cone with 12m diameter and slant height 5m
2. Find the surface of a cone with 10cm diameter and slant height 6cm.

3.

a).



b).

