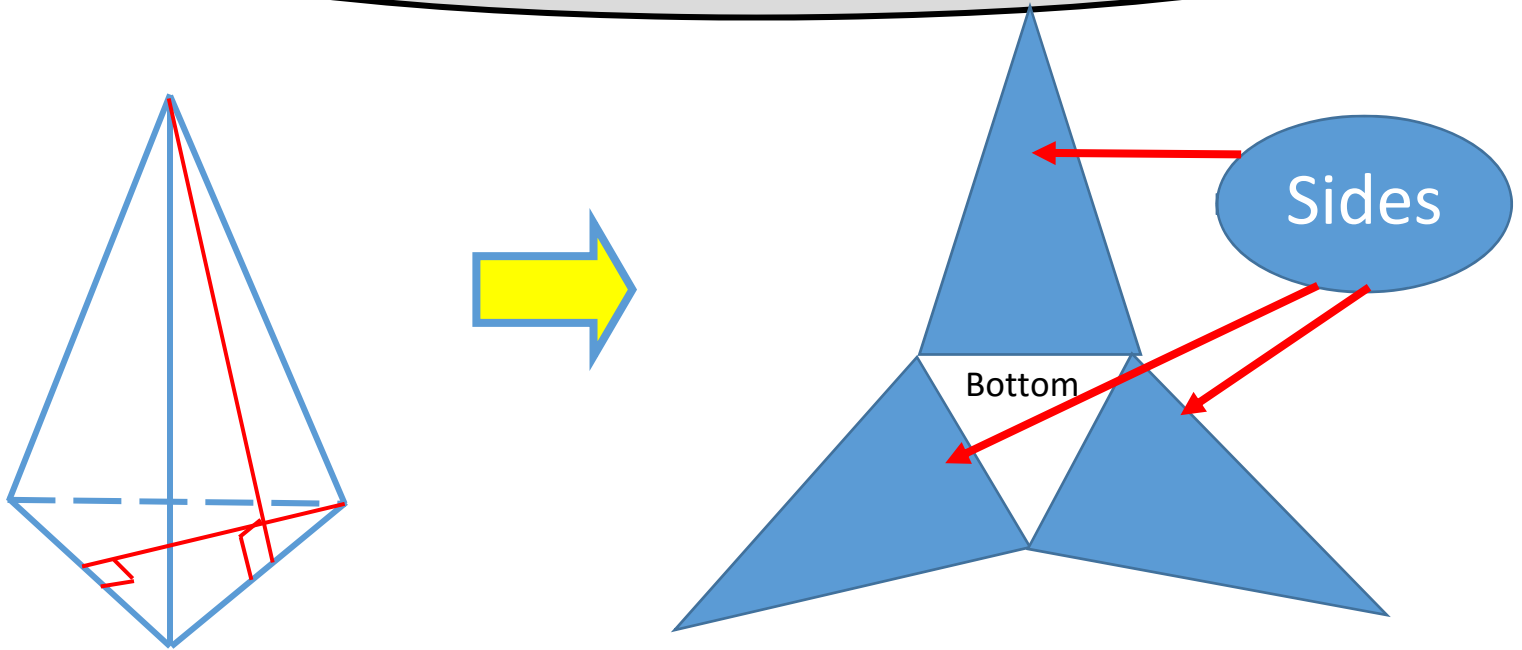


8.35 (pg 370) Surface Area of Triangular Pyramids

The **surface area** of a triangular pyramid is the sum of the areas of its 4 faces.



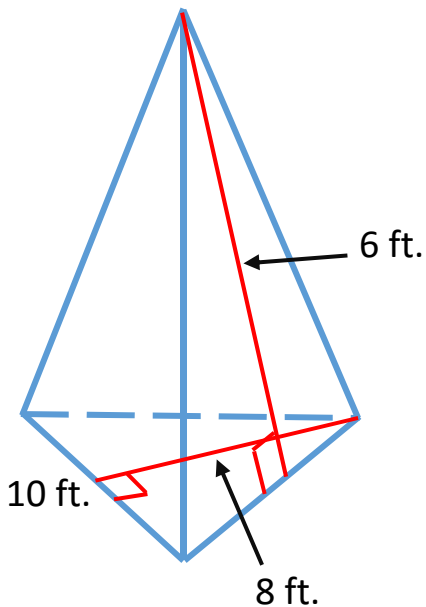
Surface Area of a Triangular Pyramid is...

$$S.A. = B + 3T$$

Where B = area of the base

Where T = area of a triangular face

Example: Find the surface area of the triangular pyramid.



$$\begin{aligned} S.A. &= B + 3T \\ &= \frac{1}{2} (10)(8) + \frac{1}{2} (10)(6) \cdot 3 \\ &= 40 + (30 \cdot 3) \\ &= 40 + 90 \\ &= 130 \text{ ft}^2 \end{aligned}$$

Another formula:

Surface Area of a Triangular Pyramid Formula

f_x

$$SA = \text{Base Area} + \frac{1}{2} (\text{Perimeter} \times \text{Slant Height})$$

This formula works because you are adding the base area to the area of all three slanted faces. The perimeter gives you the sum of all three bases. You multiply that sum times the slant height of the triangular pyramid as though you had one big rectangle, and then you take one-half of that as the area of the three triangles.