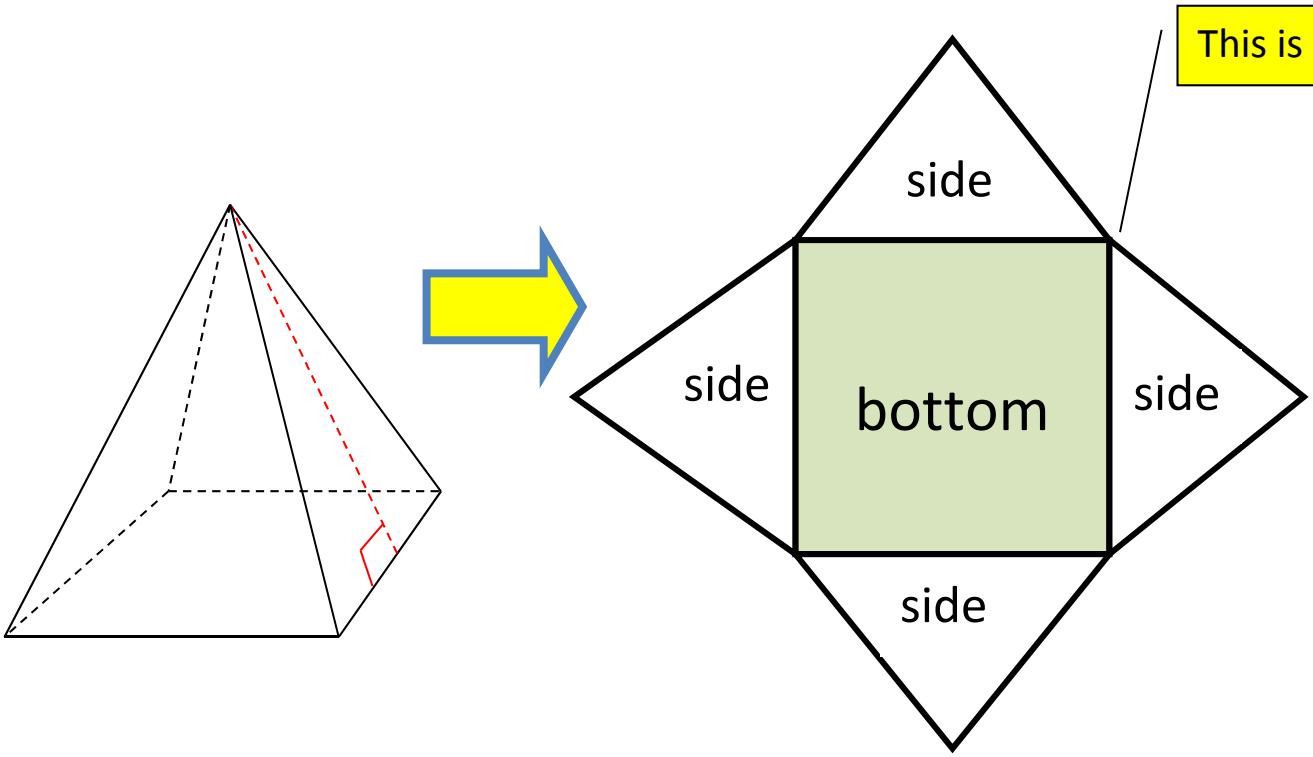
8.3 (pg. 370) Surface Area of Pyramids

The surface area of a square pyramid is the sum of the areas of its 5 faces.



Surface Area of a Square Pyramid is…

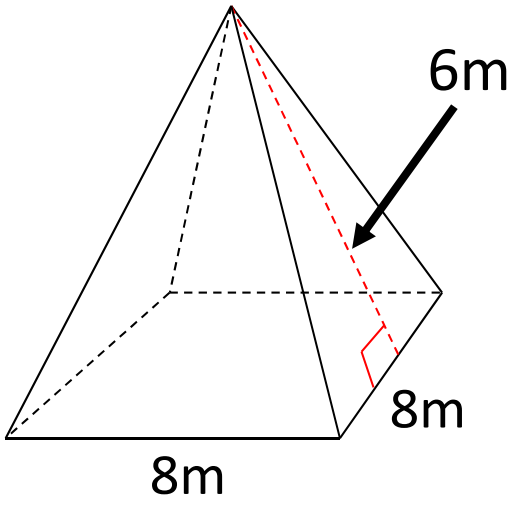
S.A. = B + 4T

Where B = area of the base

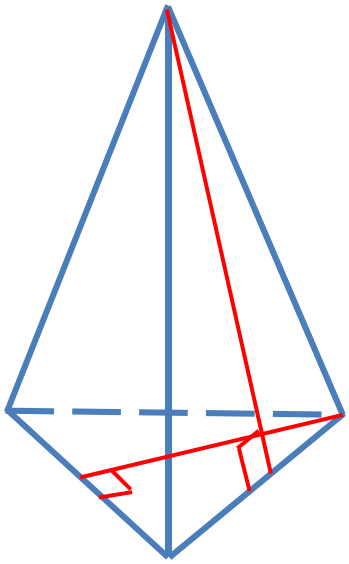
Where T = area of a triangular face

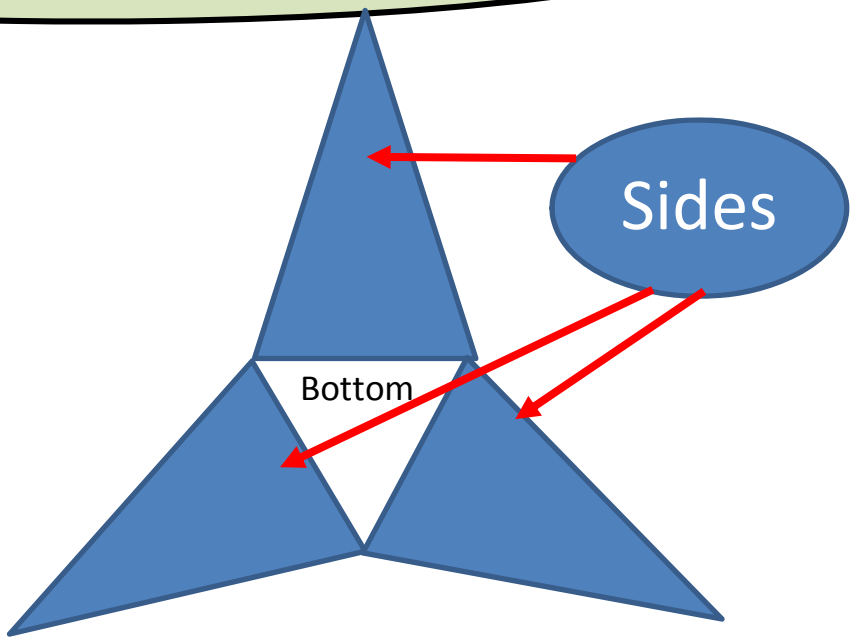
Example: Find the surface area of the square pyramid.

S.A. = B + 4T
= (8x8) + 4(0.5·8·6)
= 64 + 96
= 160 m^2



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





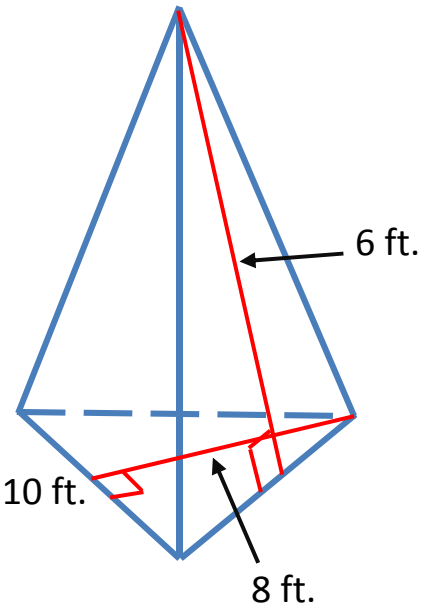
Surface Area of a Triangular Pyramid is…

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.



S.A. = B + 3T

$= \frac{1}{2}(10)(8) + \frac{1}{2}(10)(6) \cdot 3$

$= 40 + (30 \cdot 3)$

$= 40 + 90$

$= 130 \text{ ft}^2$