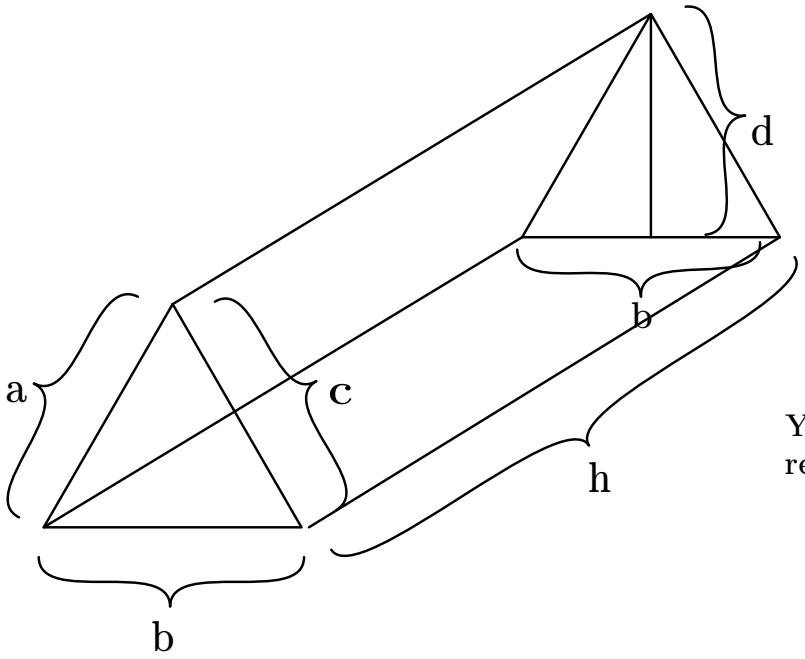
Surface Area of Triangular Prism = Lateral Area + Area of Bases

= Perimeter of Triangle×Height+2 Area of Base

$= (a+b+c)\times h + 2\left(\frac{1}{2}\text{base of triangle}\times\text{height of triangle}\right)$

$= (a+b+c)\times h + 2\left(\frac{1}{2}\times b\times d\right)$

$= (a+b+c)\times h + bd$



You can also visualize the area as that of three rectangles and two triangles.