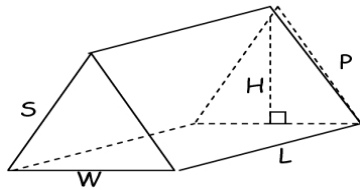


Surface Area of a Triangular Prism (tent)

- Calculate the separate areas of all surfaces and add up.
- Since it is still a type of area, the answer will always be in units².
- A triangular prism has 5 faces. The triangular bases are the same size. That means we only have to calculate the areas of three different rectangular faces, and then add double the area of one triangle.
- Think of: How much cloth would you need to pitch a tent?



Formula: $SA = WH + LW + LP + LS$

The two bases are each $\frac{1}{2}WH$

The bottom is LW

The right side is LP

The left side is LS

<p>Example: $L=10\text{cm}$ $W=6\text{cm}$ $H=8\text{cm}$ $S=5\text{cm}$ $P=4\text{cm}$</p> <p>$SA = WH + LW + LP + LS$ $SA = (6)(8) + (10)(6) + (10)(4) + (10)(5)$ $SA = 48 + 60 + 40 + 50$ $SA = 108 + 40 + 50$ $SA = 148 + 50$ $SA = 198$ $SA = 198.0 \text{ cm}^2$</p>	<p>Practice: $L=8\text{cm}$ $W=3\text{cm}$ $H=4\text{cm}$ $S=5\text{cm}$ $P=7\text{cm}$</p> <p>$SA = WH + LW + LP + LS$</p>
<p>Practice: (Round to the nearest tenth.) $L=6\text{cm}$ $W=9\text{cm}$ $H=4\text{cm}$ $S=13\text{cm}$ $P=11\text{cm}$</p> <p>$SA =$</p>	<p>Practice: (Round to the nearest tenth.) $L=5\text{cm}$ $W=4.5\text{cm}$ $H=6\text{cm}$ $S=6.5\text{cm}$ $P=2\text{cm}$</p>