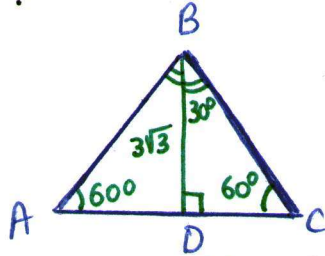
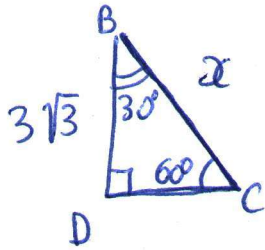


An equilateral triangle has a height of $3\sqrt{3}$ cm. What is its perimeter?

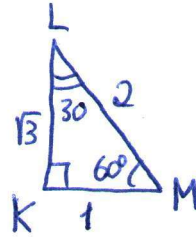
Solution!



Let x represent the side of the triangle! it's half, $\triangle DBC$ is similar to a special triangle



is similar to



$\left. \begin{array}{l} \angle DBC = \angle KLM = 30^\circ \\ \angle BCD = \angle LMK = 60^\circ \\ \angle BDC = \angle LKM = 90^\circ \end{array} \right\}$ by AAA, $\triangle BCD \sim \triangle LMK$

$$\frac{BD}{LK} = \frac{BC}{LM} = \frac{DC}{KM} \rightarrow \frac{3\sqrt{3}}{\sqrt{3}} = \frac{x}{2} \rightarrow x = 6$$

$$P = 3x = 18 \text{ cm.}$$