You can use the given sides to find: $\sin M = \frac{4}{8} = \frac{1}{2}$

Refer to the $30^\circ - 60^\circ - 90^\circ$ triangle. From there you can see that $\sin 30^\circ = \frac{1}{2}$. It follows that $m\angle M = 30^\circ$. Use the definition of cosine:

$$\frac{p}{8} = \cos M = \cos 30^\circ = \frac{\sqrt{3}}{2}$$

This implies that: $2p = 8\sqrt{3} \Rightarrow p = 4\sqrt{3}$