

③a. Find the ratio of the width of the lintel to its depth in feet, then convert measurements to inches and find the ratio again. Conclusion?

$$\text{FEET} \rightarrow \frac{15}{6} = 2.5$$

$$\text{INCHES} \rightarrow \frac{(15 \times 12)}{(6 \times 12)} = 2.5$$

Ratios are the same!

③b) Find the height of the trilithon.

$$\text{Height of upright stone} + \text{height of the lintel} \rightarrow \underline{24 \text{ ft} + 4.8 \text{ ft} = 28.8 \text{ ft}}$$

③c) How wide and deep should the scale model be? How tall should upright stones be?

$$\text{Find height of scale lintel: } \frac{28.8}{4.8} \times \frac{18}{x} \quad x = 3 \text{ in.}$$

$$\text{Therefore, height of scale } \cancel{\text{lintel}} - \text{height of lintel} = \text{height of upright scales}$$

$$\rightarrow \underline{18'' - 3'' = 15''}$$

$$\text{width of scale model: } \frac{15'}{4.8'} = \frac{x}{3''} \leftarrow \frac{x = 9.375 \text{ in}}{\text{don't have to convert as shown in 3a}}$$

$$\text{depth of scale model: } \frac{4.8'}{6'} \times \frac{3''}{x} \quad \underline{x = 3.75 \text{ in}}$$