

62. Let  $h$  represent the height of the building in feet, and  $x$  represent the horizontal distance from the building to point  $B$ . Then  $\tan 24.1^\circ = \frac{h}{x + 600}$  and  $\tan 30.2^\circ = \frac{h}{x} \Leftrightarrow x = h \cot 30.2^\circ$ .

Substituting for  $x$  gives  $\tan 24.1^\circ = \frac{h}{h \cot 30.2^\circ + 600} \Leftrightarrow h = \tan 24.1^\circ (h \cot 30.2^\circ + 600)$

$$\Leftrightarrow h = \frac{600 \cdot \tan 24.1^\circ}{1 - \tan 24.1^\circ \cot 30.2^\circ} \approx 1160 \text{ ft.}$$