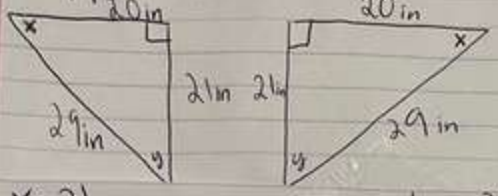
Honors Project

SOH CAH TOA

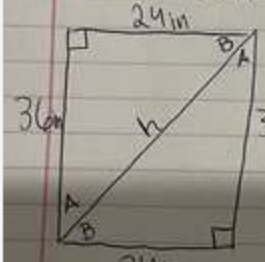
Support Braces



$x = \frac{21}{29}$
$x = .7241379311$
$\sin^{-1}(.7241379311)$
$\sin^{-1}(.7241379311) = 46.39718102$
$\angle x \approx 46.4°$

$y = \frac{21}{29}$
$y = .7241379311$
$\cos^{-1}(.7241379311)$
$\cos^{-1}(.7241379311) = 43.60281898$
$\angle y \approx 43.6°$

Rock Wall



$(A) = \frac{24}{36}$
$(A) = 1.666666667$
$\tan^{-1}(1.666666667)$
$\angle A = 33.69°$

$(\frac{h}{1})\cos(33.69) = \frac{36}{h}(\frac{h}{1})$
$\frac{\cos(33.69)}{\cos(33.69)} \quad \frac{}{\cos(33.69)}$
$h = \frac{36}{\cos(33.69)}$
$h = \frac{36}{.8320502943}$
$h = 43.26661532$
$h \approx 43.27$ in

Slide

$\tan^{-1}(x)$
$x = \frac{2}{2}$
$x = 1$
$\tan^{-1}(1) = 45$
$45°$

$(\frac{h}{1})\cos(45) = \frac{2}{h}(\frac{h}{1})$
$\frac{\cos(45)}{\cos(45)} \quad \frac{}{\cos 45}$
$h = \frac{2}{\cos 45}$
$h = \frac{2}{.7071067811}$
$h = 2.828427125$
$h \approx 2.83$ in