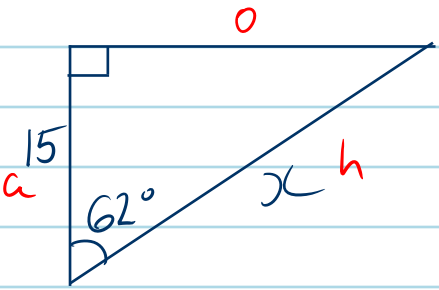
June.3rd, 2016

Unit 6 Day 6
6-4 SohCahToa

1) Solve for x

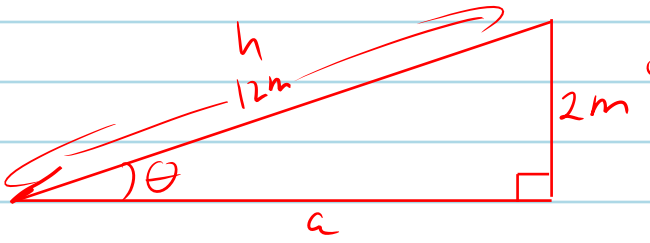


$\cos 62° = \frac{15}{x}$

$x = \frac{15}{\cos 62°}$

$x \approx 32.0$

2) A wheelchair ramp is 2m high and 12m long. What is the angle of elevation?



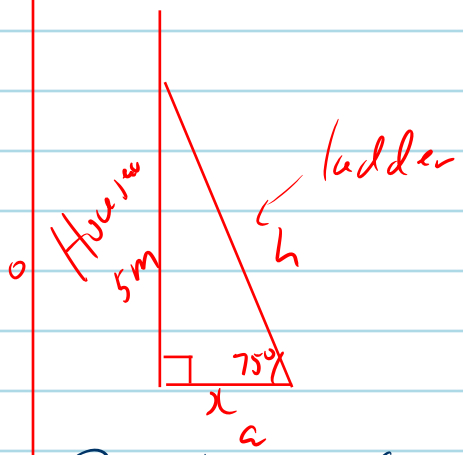
$\sin\theta = \frac{O}{h} = \frac{2}{12} = \frac{1}{6}$

$\theta = \sin^{-1}\left(\frac{1}{6}\right)$

$\theta \approx 9.6°$

3) A ladder reaches 5m up a house. For safety, the maximum angle of elevation for the ladder is 75°. How far from the base of the house should the ladder be at least?

$\tan 75° = \frac{O}{a} = \frac{5}{x}$



$x = \frac{5}{\tan 75°}$

$x \approx 1.3m$

Practice 6-5 + 6-6 even