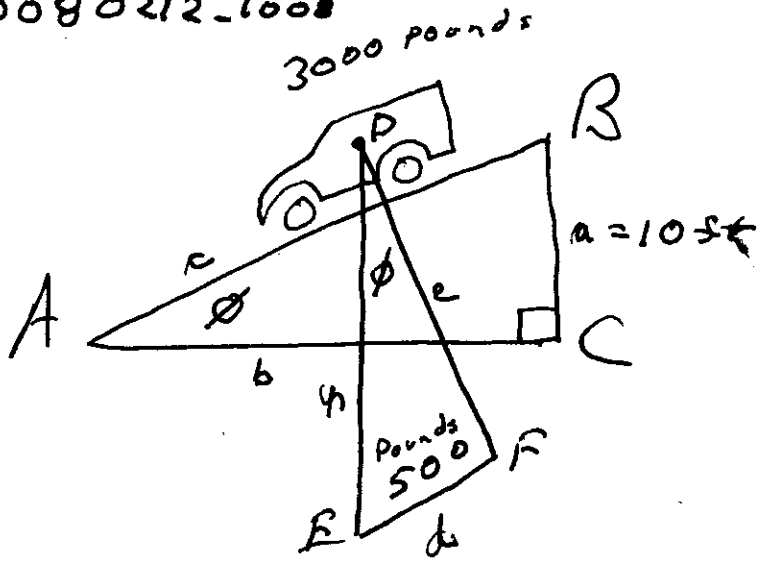


20080212-1008



Name Key

- A = $\frac{9.6}{\text{deg}}$
- B = $\frac{80.4}{\text{deg}}$
- C = $\frac{90}{\text{deg}}$
- D = $\frac{9.6}{\text{deg}}$
- E = $\frac{80.4}{\text{deg}}$
- F = $\frac{90}{\text{deg}}$
- a = $\frac{10}{\text{ft}}$
- b = $\frac{59.2}{\text{ft}}$
- c = $\frac{60}{\text{ft}}$
- d = $\frac{500}{\text{pounds}}$
- e = $\frac{2958}{\text{pounds}}$
- f = $\frac{3000}{\text{pounds}}$

Side f = $\frac{3000}{\#}$

side d = $\frac{500}{\#}$

Sine D = $\frac{500}{3000} = \frac{1}{6}$ fraction

Sine D = $\frac{.1667}{\text{decimal}}$

Angle D = $\frac{9.6^\circ}{\text{Find from book or calc.}}$

$f^2 = \frac{9,000,000}{\text{}}$

$d^2 = \frac{250,000}{\text{}}$

$e^2 = f^2 - d^2 = \frac{8,750,000}{\text{}}$

$e = \sqrt{e^2} = \frac{\sqrt{8750} \sqrt{10000}}{\text{}} = 2958$

Angle A = Angle D = $\frac{9.6^\circ}{\text{}}$

Sine A = Sine D = $\frac{1}{6}$

Side c = (side a) / (sine A) = $\frac{60}{\text{ft}}$

Angle B = $90 - \text{Angle A} = \frac{80.4^\circ}{\text{}}$

$c^2 = a^2 + b^2$
 $60^2 = 10^2 + b^2$
 $3600 = 100 + b^2$
 $b^2 = 3500$
 $b = \sqrt{3500} = 59.16$