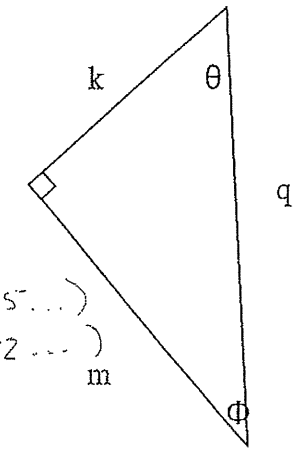
Trigonometry and Triangles:



1. If k=3 and m=4 find q. q= 5

2. If q=15 and m=9.8 find k. k= 11

3. If m=7 and Φ=36° find k, q and θ. k= 5 (5.085...) q= 9 (8.652...) θ= 54°

4. If m=14 and q=17 then sinθ= $\frac{14}{17}$ = 0.82, cosθ= $\frac{9.6...}{17}$ = 0.57, tanθ= $\frac{14}{9.6...}$ = 1.5

and sinΦ= $\frac{9.6...}{17}$ = 0.57, cosΦ= $\frac{14}{17}$ = 0.82, tanΦ= $\frac{9.6...}{14}$ = 0.69

5. If m=8.2 and q=11.2 then sinθ= $\frac{8.2}{11.2}$ = 0.73, cosθ= $\frac{7.6...}{11.2}$ = 0.68, tanθ= $\frac{8.2}{7.6...}$ = 1.1

and sinΦ= $\frac{7.6...}{11.2}$ = 0.68, cosΦ= $\frac{8.2}{11.2}$ = 0.73, tanΦ= $\frac{7.6...}{8.2}$ = 0.93

6. If m=5.9 and k=4.8 then sinθ= $\frac{5.9}{7.6...}$ = 0.78, cosθ= 0.63, tanθ= 1.2

and sinΦ= 0.63, cosΦ= 0.78, tanΦ= 0.81

7. If q=145 and Φ=19° find k and m. k= 47, m= 140

8. If q=0.665 and θ=54° find k and m. k= 0.39, m= 0.54

9. If q=64 and Φ=64° find k and m. k= 58, m= 28

10. If q=35 and Φ=21° find k and m. k= 13, m= 33

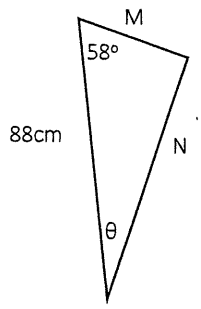
11. If q=547 and θ=38° find k and m. k= 430, m= 340

12. If m=71 and Φ=29° find k and q. k= 39, q= 81

13. If k=49 and θ=59° find q and m. q= 95, m= 82

14. Consider the following right triangle:

A. Find M.
B. Find N.



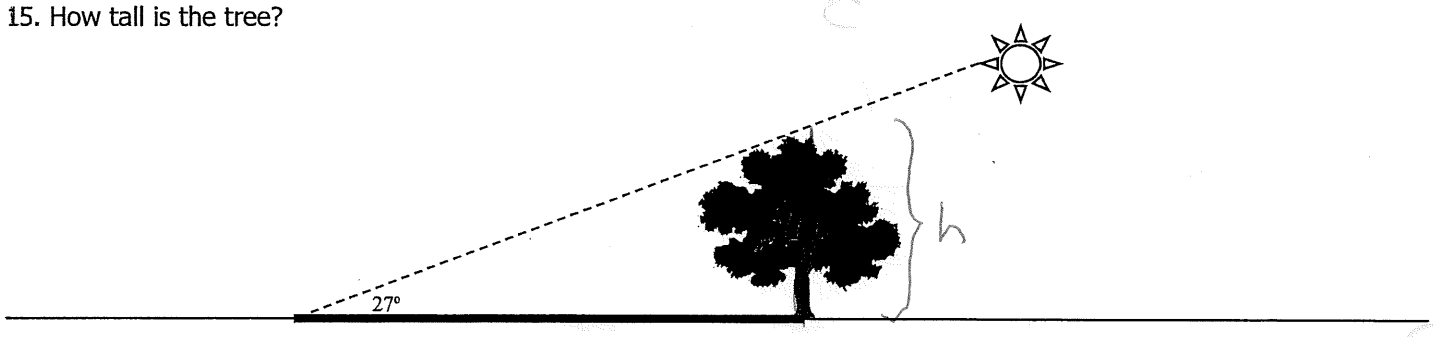
$M = 88cm(\cos 58^\circ)$

$M = 47cm$

$N = 88cm(\sin 58^\circ)$

$N = 75cm$

15. How tall is the tree?



Length of Shadow: 14.7m

$\tan 27^\circ = \frac{h}{14.7m}$

$h = 14.7m \cdot (\tan 27^\circ)$

$h = 7.5m$