Review of Right Angle Triangles

1A. The 15cm side

B. It is opposite the right angle.

C. The 9cm side

D. Side J

E. $15cm^2 = 9cm^2 + J^2$ ⇒ $J = 12cm$

2A. Side Q

B. 24cm

C. 10cm

D. 10cm

E. 24cm

F. $Q^2 = 10^2_{cm} + 24^2_{cm}$ ⇒ $Q = 26cm$

G. $\sin\theta = \frac{10_{cm}}{26_{cm}} = 0.38$

H. $\cos\theta = \frac{24cm}{26cm} = 0.92$

I. $\tan\phi = \frac{24cm}{10cm} = 2.4$

J. $\theta = \sin^{-1}\left(\frac{10}{26}\right) = 23^\circ$

K. $\phi = \tan^{-1}\left(\frac{24}{10}\right) = 67^\circ$

3A. $\theta = 90^\circ - 66^\circ = 24^\circ$

B. $\cos\theta = 0.91$

C. $\sin\theta = 0.41$

D. $\cos 66^\circ = 0.41$

E. $\sin 66^\circ = 0.91$

G. $N = 123m \cos 24^\circ = 110m$ OR $N = 123m \sin 66^\circ = 110m$

F. $M = 123m \cos 66^\circ = 50m$ OR $M = 123m \sin 24^\circ = 50m$