

1.  
 $\sin 30^\circ = c = 1/2$

2.  
 $\cos 45^\circ = n/a$

3.  
 $\tan 45^\circ = b = 1$

4.  
 $\sec 60^\circ = g = 2$

5.  
 $\csc 60^\circ = n/a$

7.  
 $\sin A = 21/29$   
 $\cos A = 20/29$   
 $\tan A = 20/21$

25.  
 $\sec 39^\circ$   
 $90^\circ - 39^\circ = 51^\circ = \csc 51^\circ$

27.  
 $\sin 38.7^\circ$   
 $90^\circ - 38.7^\circ = 51.3^\circ = \cos 51.3^\circ$

31.  
 $\tan \alpha = \cot(\alpha + 10^\circ)$   
 $2\alpha + 10 = 90^\circ \quad \tan 40^\circ = \cot 50^\circ$   
 $\quad \quad \quad -10 \quad -10$   
 $2\alpha = 80^\circ$   
 $/2 \quad /2$   
 $\alpha = 40^\circ$

33.  
 $\sin(2\theta + 10^\circ) = \cos(3\theta + 20^\circ)$   
 $2\theta + 10^\circ + 3\theta - 20^\circ = 90^\circ \quad \sin 50^\circ = \cos 40^\circ$   
 $5\theta - 10^\circ = 90^\circ \quad \theta = 20^\circ$   
 $\quad \quad \quad +10^\circ \quad +10^\circ$   
 $5\theta/5 = 100^\circ/5 \quad 2\theta + 10^\circ = 50^\circ$   
 $\quad \quad \quad \quad \quad \quad 3\theta - 20^\circ = 40^\circ$

49.  
 $\tan 30^\circ = o/a = 1/\sqrt{3}$

51.  
 $\sin 30^\circ = o/h = 1/2$

56.  
 $\sec 45^\circ = h/a = \sqrt{2}/1 = \sqrt{2}$

62.  
 $\cos 60^\circ = a/h = 1/2$

74.  
 $\cos 60^\circ = 24/12$

$\tan 60^\circ = 12(\sqrt{3})/12$   
 $\sin 45^\circ = 12(\sqrt{3})/12(\sqrt{3})(\sqrt{2})$

$a = 12$   
 $b = 12(\sqrt{3})$   
 $c = 12(\sqrt{5})$   
 $d = 12(\sqrt{3})$

77.  
 $s = 1$   
 $1^2 = 1$   
 $1/2 = 1/2$   
 $s(\text{area}) = 1/2$