Double Angle Identities

Sin(2x)=2sinx cosx

Cos(2x)=cos2x- sin2x

cos2x =1- sin2x pythag sin2x =1- cos2x

Cos(2x)=cos2x- sin2x and Cos(2x)=cos2x- sin2x

Cos(2x)= 1- sin2x - sin2x and Cos(2x)=cos2x- (1- cos2x)

Cos(2x)= 1- 2sin2x and Cos(2x)=2cos2x- 1

2sin2x = 1- Cos(2x) and 2cos2x= 1+ Cos(2x)

Sinx=$\pm \sqrt{\frac{1- Cos(2x) }{2}}$ and cosx=$\pm \sqrt{\frac{1+ Cos(2x) }{2}}$

|  |
| --- |
| Half Angle Identities |
| Sin(u/2)=$\pm \sqrt{\frac{1- Cos(u) }{2}}$ and cos(u/2)=$\pm \sqrt{\frac{1+ Cos(u) }{2}}$ |

Sin(22.5o) )=$\sqrt{\frac{1- Cos(45) }{2}}in QI$ =$\sqrt{\frac{1- \frac{\sqrt{2}}{2} }{2}}=.3826$

LAW of SINES SAA or ASA or AAS





A=45degrees a=1.5 b=(2)^.5 find B

sinB=1/3 B=sin-1(1/3)=19 degrees