**TRIGONOMETRIC IDENTITIES**

P(t) = (cos t, sin t)

tan t =  sec t =  csc t = 

cos t = 

**PYTHAGOREAN IDENTITIES**

Sin2 t = cos 2 t = 1 1 + tan2 t = sec2 t 1 + cos2t = csc2t

**NEGATIVE ANGLE IDENTIES**

sin(-t) = -sin t cos(t) = cos t tan(-t) = -tan t

**ADDITION AND SUBTRACTION FORMULAS**

sin(A+B) = sinAcosB + cosA sinB

sin (A-B) = sinAcosB – cosAsinB

cos (A+B) = cosAcosB – sinAsinB

cos(A – B) = cosAcosB + sinAsinB

tan(A + B) = $\frac{tanA+\tan(B)}{1-tanAtanB}$ tan (A-B) = 

**DOUBLE ANGLE FORMULAS**

sin 2t = 2sintcost

cos 2t = cos2t – sin2t = 2cos2t – 1 = 1 – 2sin2t

tan 2t = 

There are many variations of the double angle formulas that can be derived using the above formulas. For example:

cos6t = cos23t – sin23t sint = 2sin cos  sin2t = (1 – cos2t) cos2t = (1 – cos 2t) etc.