30.

195° = tanθ & cotθ

32.

125° = sinθ & cscθ

34.

855° = sinθ & cscθ

39.

sinθ > 0, cscθ > 0 = Quadrants I & II

47.

secθ < 0, cscθ < 0 = Quadrant III

65.

sinθ = 3/5

cos = x/5 = 4/5

sqrt(x^2+3^2)
sqrt(x^2+9)
sqrt(16+9)
sqrt(25) = 5

25-9 = 16 = x^2

sqrt(16) = 4 = x

74.

sinθ = y/r = -(4/5)
cosθ = x/r = -(3/5)
tanθ = y/x = 4/3
cscθ = r/y = -(5/4)
secθ = r/x = -(5/3)
cotθ = x/y = 3/4

sqrt(-3^2+y^2)
sqrt(9+y^2)
sqrt(9+16)
sqrt(25) = 5
y = 4

77.

sinθ = y/r = 8/sqrt(67)
cosθ = x/r = sqrt(3)/sqrt(67)
tanθ = y/x = 8/sqrt(3)
cscθ = r/y = sqrt(67)/8
secθ = r/x = sqrt(67)/sqrt(3)
cotθ = x/y = sqrt(3)/8

sqrt((sqrt(3)^2+8^2) = r
sqrt(3+64) = r
sqrt(67) =r

79.

sinθ = y/r = sqrt(2)/6
cosθ = x/r = -(sqrt(34)/6)
tanθ = y/x = sqrt(2)/sqrt(34)
cscθ = r/y = 6/sqrt(2)
secθ = r/x = 6/sqrt(34)
cotθ = x/y = -(sqrt(34)/sqrt(2))

sqrt(x^2+sqrt(2)^2)
sqrt(x^2+2)
sqrt(34+2)
sqrt(36) = 6

85.

1+cotθ^2 = cscθ^2
-cotθ^2 -cotθ^2
cscθ^2 - cotθ^2 = 1
1 = (r/y)^2 - (x/y)^2
1 = cscθ^2 - cotθ^2

r = sqrt(x^2+y^2)
r^2/r^2 = (x^2+y^2)/r^2
1 = ((x^2)/(r^2))+((y^2)/(r^2))

89.

sin2θ = Negative

100.

cos(θ+180) = Negative