SOLUTIONS TO ASSIGNMENT

1. Given sinA=3/5. There fore opp=3 and hyp=5, hence adj=4.

   cosA=adj/opp = 4/5

2. Given 5cosA=3, therefore cosA=3/5. adj = 3; hyp = 5 implies opp = 4.

   tanA = opp/adj = 4/3 and cotA = 1/tanA = 3/4

3. Given sinA=12/13.

   cosecA = 1/sinA = 13/12

4. Given cosA=12/13,

   secA = 1/cosA = 13/12

5. Given tanA=3/4, therefore opp= 3, adj = 4 hence hyp = 5

   cotA = 1/tanA =4/3, cosecA=hyp/opp = 5/3 and secA = hyp/adj =5/4.

6. Given sinA=x, where 0<x<1, then

$$\sin A \cdot \cos A \cdot \tan A \cdot \sec A \cdot \cos ecA \cdot \cot A = \sin A \cdot \cos A \cdot \tan A \cdot \frac{1}{\cos A} \cdot \frac{1}{\sin A} \cdot \frac{1}{\tan A} = 1$$

7. Given secA=3/1, then adj=1, hyp=3 and opp = $\sqrt{8}$

$$\sin A \cos A = \frac{opp}{hyp}\frac{adj}{hyp} = \frac{\sqrt{8}}{3}\frac{1}{3} = \frac{\sqrt{8}}{9}.$$

8. Since hypotenuse is greater than opposite so sine of acute angle must be less than 1

9. Since hypotenuse is greater than adjustant so secant of acute angle must be greater than 1.

10. For acute angle A, if sinA = cosA, then $\frac{opp}{hyp} = \frac{adj}{hyp}$.

    Therefore opposite side = adjustant side hence triangle is an isosceles triangle.