1. In  the . Draw the appropriate triangle. **[4K 4A]**  
    Determine the cosine and tangent ratios for this angle. Then find the appropriate reciprocal identities.
2. Given , where **[4K ]**
3. Determine all possible angles for given the restriction
4. Draw the two special triangles (labeled with all angles and lengths of sides). **C [ 10 ]**
5. Find the exact value of . Sketch it’s position on the circle. **[2K 2A]**
6. If calculate the **exact value of** (no calculators). **K [ 6 ]**
7. the angle

**b) using the value you found in a) find**

1. Given , where , determine **two possible values of** . Round to one decimal place. **Sketch** both angles. **K[ 4 ]**
2. Solve , if Round the side lengths and angles to the

nearest tenth. **K [ 8 ]**

1. Given that find all angles of between [3I]
2. Find all angles between where [2I]

1. Prove each identity.
   1.  [3A]
   2.  [4I]
2. Boats P and Q are anchored in the harbour. From boat P, boat Q is 200 m away, and from boat P it is 300 m to the base A of a tower on the shore. Also from boat P the angle between the base of the tower A, and boat Q is 88o. From boat Q, the angle of elevation to the top of the tower is 38º. Find the height of the tower. [5A]

P

Q

Tower

N

A

*h*