1. In $Quadrant$$II$ the $\sin(\left(θ\right))=\frac{9}{15}$. Draw the appropriate triangle. **[4K 4A]**
 Determine the cosine and tangent ratios for this angle. Then find the appropriate reciprocal identities.
2. Given $\sin(β= -\frac{1}{2})$ , where $-90^{o} \leq β \leq 270^{o}$ **[4K ]**
3. Determine all possible angles for $β$ 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 $sin(660)$. Sketch it’s position on the circle. **[2K 2A]**
6. If $sec⁡(θ)=2, 0^{o}\leq θ\leq 90^{o}, $calculate the **exact value of** (no calculators). **K [ 6 ]**
7. the angle$θ$

**b) using the value you found in a) find** $tan\left(θ\right)sec\left(θ\right)+cos^{2}\left(θ\right)$

1. Given $\sin(\left(x\right))= -0.3154$, where $0^{o} \leq x \leq 360^{o}$, determine **two possible values of** $x$. Round to one decimal place. **Sketch** both angles. **K[ 4 ]**
2. Solve $∆ABC$, if $∠A=27.3^{o}, b=15.5 cm, and a=9.8 cm.$ Round the side lengths and angles to the

nearest tenth. **K [ 8 ]**

1. Given that $\tan(\left(θ\right))=undefined$find all angles of $θ$ between $0\leq θ\leq 360$ [3I]
2. Find all angles between $0\leq θ\leq 360$ where [2I]

$\cos(\left(θ\right))=-cos⁡(-60)$

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*