Maths Revision Worksheet: Paper II Trigonometry

2014 Q8 and Q9
2013 Q8
2012 Q7
2011 Q5

1. I know how to use Pythagoras Theorem to find the third side of a right angled triangle given the other 2 sides.
   Ex1 Pg 392
2. I know how to use the Sine, Cosine and Tangent ratios to find angles and side lengths in right angled triangles.
3. I know how to label the sides of a triangle in terms of hypotenuse, opposite and adjacent given an angle.
4. I know to make sure that my calculator is in degrees by pressing **SHIFT SETUP 3**
5. I know **how to find the sin and cos of an angle given the tan of the angle by drawing the triangle and solving using the ratios and/or Pythagoras.**
   Ex1 Pg 395
6. I know how to use my calculator to find the sin, cos and tan of an angle given in either

   ° ' " (degrees minutes and seconds) or as a decimal

7. I know how to find the sin, cos and tan inverse to find an angle given the sin, cos or tan of the angle.
   Ex 1 Pg 397
8. I can use the above skills to solve right angled triangles.
   Ex 1 and 2 pg 399
9. I can label any triangle using capital letters to denote the angles at the vertices A, B and C and lower-case letters to denote the sides a, b and c opposite these angles. I know that it does not matter which angle I label A, b or C so long as I label the opposite side correctly!
10. I know that I can find the **area of a triangle by multiplying ½ the product of any two sides by the sine of the angle between them**. **A = ½ ab sin C** LOG BOOK pg 16
    Ex 1 and Ex2 Pg 403/404
11. I know how to use the **Sine Rule** to find the sides and angles of non right angled triangles. I know that the Sine rule can be found in the **log tables on page 16** and that it can be written with the side lengths a, b and c as the numerators when trying to find a side or with the trig ratios sin A, sin B and sin C as the numerator when looking to find an angle.
    Ex 1 and 2 Pg 407

12. I can use the Cosine Rule to (i) find an angle when the 3 sides of a triangle are given or (ii) find a third side when 2 sides and the included angle are given.
Example 1 and 2 Pg 410

13. I know that when solving a triangle I will try the sine rule first before trying the cosine rule.

14. I know that if the cosine of an angle in a triangle is negative then the angle will be between 90° **and** 180°

15. I know that the sine, cosine and tangent ratios for 30°, 45° and 60° are given on **page 13 of the log tables** and can use these special angle ratios to solve triangles.
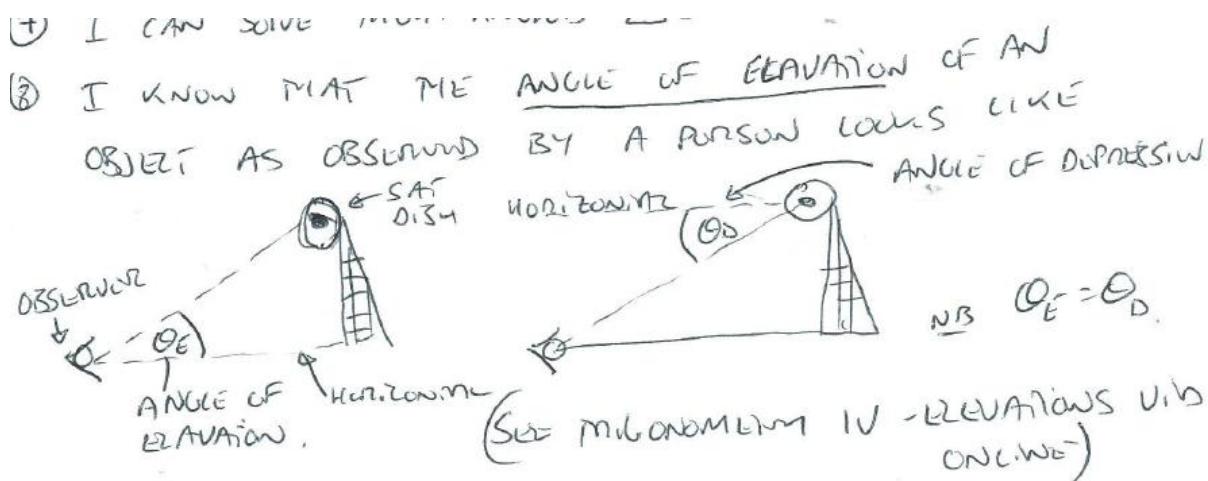**Ex 1 Pg 416**

16. **I know that Tan ^{2} 30° is the same as (Tan 30°)(Tan 30°)**

17. I know how to find the circumference and area of a circle.

18. I know how to find tha Area of a Sector and the length of a minor arc using the 'degrees' formula on **Page 8 of the log tables**.
Ex 1and 2 Pg 417

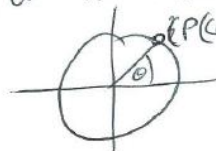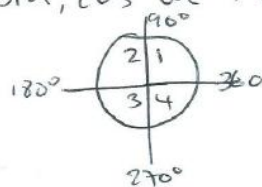19. **Angles of Elavation and Depression (Angle of Elav = Angle of Depression)**

20. I know that the unit circle is divided into 4 quadrants and that the **CAST** rule is used to find the ratio of an angle between 90° and 360°
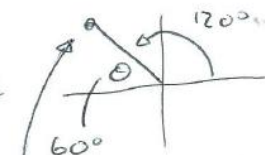**Ex 1 and Ex 2 Pg 423**

21. **I know how to use the CAST rule by equating the given angle to its reference angle.**

22. I KNOW THAT THE UNIT CIRCLE CONTAINS 4 QUADRANTS.
AND THAT I CAN WORK WITH THESE TO FIND THE
$\sin$, $\cos$ OR TAN OF AN ANGLE $> 90°$.

NB $\cos\theta \sim x$
$\sin\theta \sim y$

$P(\cos\theta, \sin\theta)$

23. I CAN FIND $\sin 120°$ ie

$\therefore \sin 120° =$

$60°$

$P(-\cos\theta, \sin\theta)$ $\therefore \sin 120° = \sin 60°$
$= \dfrac{\sqrt{3}}{2}$.