Chapter 22 Trigonometry

1. I know that the Theorem of Pythagoras states that "**in a right angled triangle, the area of the square drawn on the hypotenuse is equal to the sum of the squares drawn on the other 2 sides**" and can solve problems using this theorem.
   Q1 Q3 Q5 Q7 Q9 Q11 Q13 Q15 Q17 Page 430

2. I can use the Sine, Cosine and Tangent ratios to solve Right angled triangles.
3. I know that $\sin^2 A$ is the same as (sin A)(sin A)
4. I know to set my calculator to DEG mode by 'SHIFT SETUP 3'
5. I can sketch right angled triangles and find the sin b and cos b given tan b
   Example 1 Page 434
   Q1 Q2 Q4 Q6 Q8 Q9 Q10

6. I can use my calculator to find the sin, cos and tan of angles
7. I can use my calculator to find the $\sin^{-1}$, $\cos^{-1}$ and $\tan^{-1}$ inverse of angles
   i.e if tan A = 35° => A = $\tan^{-1}$ 35° etc.
8. I know that angles can measured in Degrees, Minutes and Seconds **(DMS)** and that this is represented on my calculator by the **°'"** button.
9. I can convert from ° to °'" and from °'" to decimal form

   i.e. 76.7° °'" = 76° 42' 0"

   i.e. 35° 54' => 35 °'" 54 °'" = SHIFT °'" 35.9°

   See Examples 1,2 and 3 Page 436
   Q1 Q3 Q5 Q7 Q9 Q11 Q13 Q15 Q17 Q18 Page 437

10. I can solve Right Angled Triangles
    Q1 Q3 Q5 Q7 Q9 Q11 Q13 Page 441

11. I know that the **angle of elevation** is the angle between the horizontal up to the line of sight to an object
12. I know that the **angle of depression** is the angle between the horizontal down to the line of sight and that these can be measured with a **clinometers**
    See Example 1 Page 444

13. I can use trigonometry to solve problems

Q1 – Q18 Page 444

14. I know that the sin, cos and tan of the angles 30°, 45° and 60° are generally expressed as SURDS (a square root number like √2 which is irrational..i.e. never ending and non repeating) and that these values can be found on Page 13 of the Log Tables and Page 449 of Text and Tests.
15. I can solve problems involving the angles 30°, 45° and 60° without using a calculator.
    Example 1 Page 449
    Q's 1 to 16 Page 450