Chapter 23 Graphing Functions

1. Given the equation of a line I can use the intercept method to find 2 points on the line and plots these to graph the line. Page 456
   Q11 page 458

2. I can graph a given linear or quadratic function for a given domain manually or by using the 'Table' command on my calculator.
   Q5 Page 457

3. Given a graph I can find **f(3)** by drawing a **VERTICAL** line **through X=3** and finding the corresponding y value where the x=3 line cuts the graph.
     I know that I can be asked this in **several ways** including
                     Find f(x) when x=3
                     The value of f(3)
                     f(3)
                     the value of y when x=3

4. Given a graph I can find **f(x)=0** by drawing a HORIZONTAL line through y=0 and finding the corresponding x values where the line y=0 cuts the graph.

     I know that I can be asked this in **several ways** including

             The values of x when f(x)=0
             The values of x for which f(x)=0
             The values of x when y=0
             The roots of the equation f(x)=0
             f(x)=0
             Solve the equation x^2-3x-4=0

   I also know that the I can be asked for all of the above for other numerical values like f(x)=3 etc.

5. I know that 'the values of x for which **f(x)<0** or the 'range of values for which f(x) is negative' are both asking me for the range of x values where the curve or line is BELOW the x axis i.e where the corresponding y values are negative (opposite applies to positive)

6. I know how to **find the coordinates (x,y) of the maximum or minimum turning point** of a quadratic curve.

   I know that the x values gives me the **'equation of the axis of symmetry i.e. x=2'**

I know that the y value is known as **'the minimum value of f(x)'**

7. I know how to find the range of **values of x for which f(x) is increasing** by simply looking for the part of the graph where the y values are increasing looking from left to right.

   All of the above Q3 Q5 Page 467

8. **Intersecting Graphs:**

   I know that a graph of f(x) intersects a graph of g(x) at f(x)=g(x)

   I know how to find the **intersection of 2 graphs** by solving their equations simultaneously or by equating the functions and solving for the x value(s) which I then sub into either of the original functions to find the corresponding y value(s)

   I know that **'Find f(x)<g(x)'** is asking for the range of x values for which the graph of the function f(x) is below the graph of the function g(x)
   Q11 and Q12 Page 469

9. I can **plot a graph of an exponential** function.

10. Maximum and Minimum Graphs.
    I can plot quadratic graphs from real life situations and can answer real life questions in relation to the graph.
    Q2 Q4 Q5 Q7 Page 472