1. Factorize the following

      i. $X^2 + 15X + 50$

      II. $X^2 + 18X + 19$

2. By completing square method, find the value of

      $3X^2 + 12X - 60 = 0$

3. Using graphical method solve $Y=X^2 + 4X + 1$ and $Y=2X + 1$

4. Draw the graph of $Y =2X^2 + 5X - 12$ for $-8 \leq X \leq 4$ and find the solution of

      a. $Y = 2X^2 + 5X - 12$

      b. $X^2 + X - 6$

      c. $3 - 7X - 3X^2$

5. Solve $Y=3+7X-X^2$

                $5X - Y = -4$

6. Find the percentage error of the volume of a cylinder of radius 7.0cm and a height of 18.257cm.

7. The temperatures are stated as $a=2.7^oc$, $b=3.4^oc$, $c=9.8^oc$ and $d=3.05^oc$. Find the percentage error of the following

      a. $bc - ad$

      b. $\frac{a+b}{c+d}$

8. A ship starts from point A on a bearing of 053° and travels for 17km to point B. It then changes its course to a bearing of 120° and travels up to a point C. If the bearing of A and C is 290°, find how far C is from A and the distance of B from C.

9. Rationalize the following

      a. $\dfrac{\sqrt{20} + \sqrt{\pi}2}{\sqrt{5} + \sqrt{28}}$

      b. $\dfrac{1 + cos30}{1 - Sin60}$

10.   a. $\log_2 y = \log_2 3 + \log_2 7 + 2\log_2 y$. Find the value of y

      b. $2^2 + \log_2 X^2 + 5\log_2 2 = 9$ Find the value of x