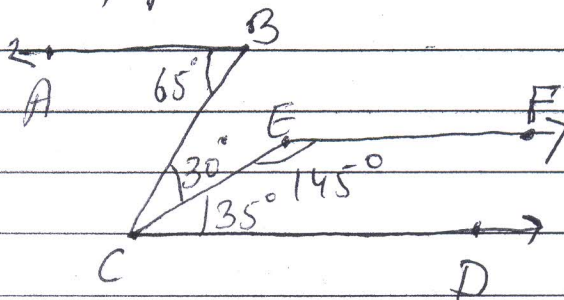


Q.1 Prove that, if a transversal intersects two lines such that a pair of alternate interior angles is equal, then the two lines are parallel.

2. In figure, prove that $AB \parallel EF$.



3) If $(x-1)^3 = 8$, what is the value of $(x+1)^2$

4) If $2^{-m} \times \frac{1}{2^m} = \frac{1}{4}$, then find the value of $\frac{1}{14} \left[(4^m)^{\frac{1}{2}} + \left(\frac{1}{5^m}\right)^{-1} \right]$

5.) Represent 6.473 on the number line.

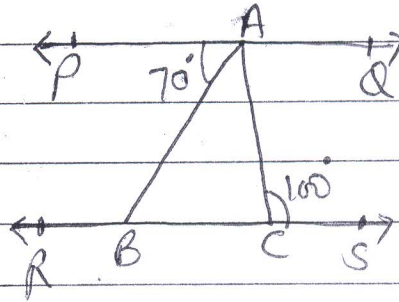
6.) Simplify $(4x+2y)^3 - (4x-2y)^3$

7.) If $x = \sqrt{6} + \sqrt{5}$, then find $x^2 + \frac{1}{x^2} - 2$

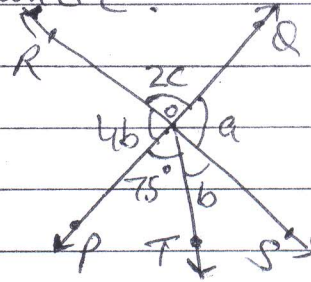
8.) Factorize $x^9 - y^9$

9) If $(a+b) = 10$ and $a^2 + b^2 = 58$, Find the value of $a^3 + b^3$.

10.) In figure, $PQ \parallel RS$, $\angle PAB = 70^\circ$ and $\angle ACS = 100^\circ$. Determine $\angle ABC$, $\angle BAC$ and $\angle CAQ$.



11.) Two straight lines PQ and RS intersect each other at O. If $\angle POT = 75^\circ$, find the values of a, b and c.



12.) The perimeter of triangular field is 450 m and its sides are in the ratio 13:12:5, Find the area of the triangle.

13.) Find the percentage increase in the area of a triangle if its each side is doubled.

14.) Find the area of a quadrilateral ABCD in which $AD = 24$ cm, $\angle BAD = 90^\circ$ and BCD forms an equilateral triangle whose each side is equal to 26 cm.

15.) Find the area of a trapezium whose parallel sides 25 cm, 13 cm and other sides are 15 cm and 15 cm.

Creative work :-

1) Write the statements of all theorems and axioms of V-6 (lines and angles).

2) Write the algebraic identities on A-3 paper sheet.

3)

27/04/15