

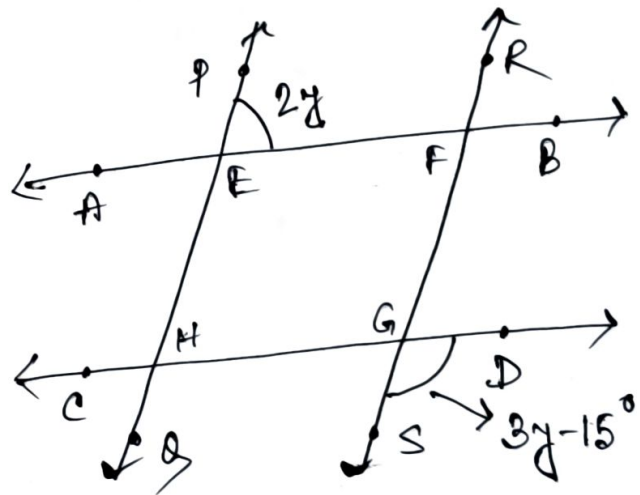
① Factorise the polynomial: $[2 \times 3 = 6]$

① $\frac{1}{64}x^3 - 8y^3 - \frac{3}{8}x^2y + 3xy^2$

② $a^3 - 8b^3 - 64c^3 - 24abc$

③ If $2^x = 3^y = 6^{-z}$, prove that $\frac{1}{x} + \frac{1}{y} + \frac{1}{z} = 0$ $[3]$

④ If $x = 2p + 1$ and $y = p - 1$ is a solution of linear equation $2x - 3y + 5 = 0$, find the value of p . $[2]$



⑤ In the adjoining figure, lines PQ and RS are parallel. For what value of y , the lines AB and CD be parallel? $[3]$

⑥ Two adjacent sides of a parallelogram are 9 cm and 8 cm respectively. If one of the diagonal is 13 cm, find its area. $[3]$

⑦ The surface area of a solid metallic sphere is 616 cm^2 . It is melted and recast into smaller spheres of diameter 3.5 cm. How many such spheres can be obtained? $[3]$