

① Prove that, $\frac{2^{30} + 2^{29} + 2^{28}}{2^{31} + 2^{30} - 2^{29}} = \frac{7}{10}$

② Which of the following is a factor of $(x+y)^3 - (x^3 + y^3)$?

- (a) $x^2 + y^2 + 2xy$ (b) $x^2 + y^2 - xy$ (c) xy^2 (d) $3xy(x+y)$

③ If $3x = a+b+c$, then the value of $(x-a)^3 + (x-b)^3 + (x-c)^3$ is $\rightarrow$

- (a) $(a+b+c)$ (b) $(a-b)(b-c)(c-a)$
 (c) $3(x-a)(x-b)(x-c)$ (d) 0

④ If $\left(\frac{3}{4}\right)^6 \times \left(\frac{16}{9}\right)^5 = \left(\frac{4}{3}\right)^{x+2}$, find the value of x .

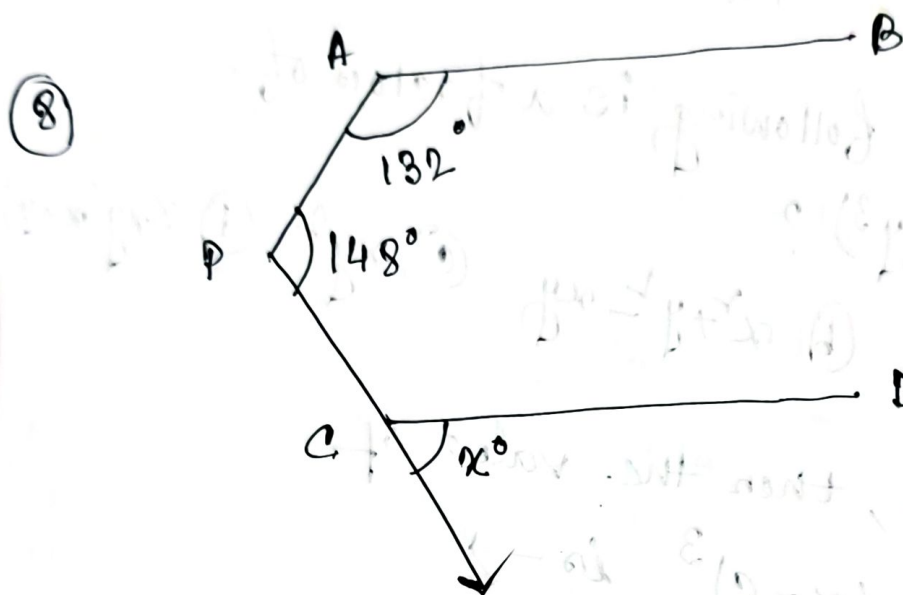
⑤ $(x+1)$ is a factor of $x^n + 1$ if and only if -

- (a) n is an odd integer (b) n is an even integer
 (c) n is a negative integer (d) n is a positive integer

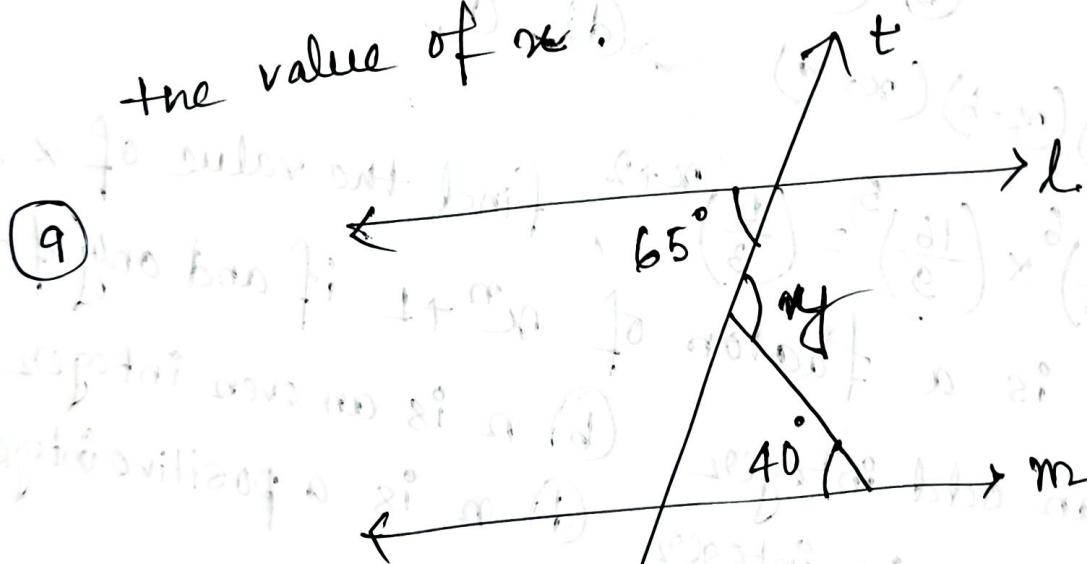
⑥ A point whose abscissa is -3 and ordinate 2 lies in -

- (a) Quadrant I (b) Quadrant II (c) Quadrant III
 (d) Quadrant IV

- ⑦ The image of the point $(-5, 7)$ in y axis has the co-ordinates —
- (a) $(5, 7)$ (b) $(-5, -7)$ (c) $(5, -7)$ (d) $(7, -5)$



In the above fig., if $AB \parallel CD$, then find the value of x .



If $l \parallel m$ and 't' transversal, find the value of y .

- ⑩ In the adjoining figure, if $CP \parallel BQ$, then find the measure of ϕ .

