



B.M. BHARTI MODEL SCHOOL

(Senior Secondary School)
(Recognised and Affiliated to CBSE)
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Winter Break Holiday Homework

CLASS- IX

SUBJECT- Mathematics

Q1). Simplify $6 - \frac{4\sqrt{3}}{6+4\sqrt{3}}$ by rationalising the denominator.

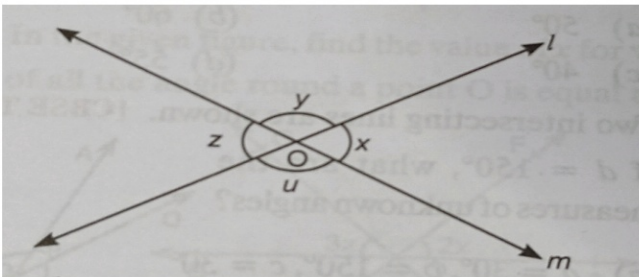
Q2). Find the value of a and b ,if $\sqrt{3} - \frac{1}{\sqrt{3}+1} = a + b\sqrt{3}$

Q3) Let A and B are the remainders when polynomial $f(x) = 4x^3 + 3x^2 + 12ax - 5$ and $g(x) = 2x^3 + ax^2 - 6x - 2$ are $(x-2)$ respectively .if $3A + B - 28 = 0$,find the value of a .

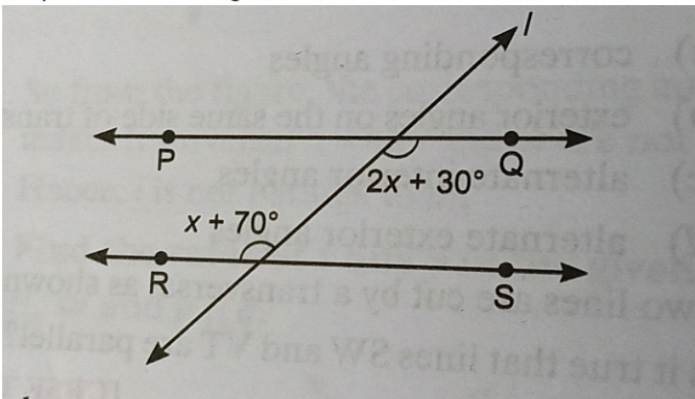
Q4) If $x^{51} + 51$ is divided by $x + 1$, then find the remainder.

Q5) write $3x + 2y = 18$ in the form of $y = mx + c$.find the value of m and c .Is $(4,3)$ lies on this linear equations.

Q6) lines l and m intersect at O .If $\angle = 45^\circ$, find y,z and u.



Q7) In the figure PQ || RS ,and l is transversal,than what will be the value of x?



Q8) A chord of a circle is equal to the radius of the circle.find the angle subtended by the chord at point of minor arc .

Q9) find the area of a triangle whose perimeter is 180 cm and its two sides are 80cm and 18cm.calculate the altitude of triangle corresponding to its shortest side .

Q10) The diameter of a sphere is decreased by 25% .find its new volume.