

ATOMIC ENERGY CENTRAL SCHOOL # 3 (RAWATBHATA)

PERIODICAL TEST-1 (2018 -2019)

CLASS IX

MAX. MARKS – 40

SUBJECT – MATHEMATICS

TIME-1HOUR 30 MINUTES

SECTION A(Question numbers1 to 4 carry 1 mark each)

1. Find the product $(11+2\sqrt{3})(11-2\sqrt{3})$
2. Find the remainder when the polynomial x^3+3x^2+3x+1 is divided by $(x+2)$
3. Find the zero of the polynomial $p(x)= 3x-2$
4. In which quadrant does the point $(-2, 8)$ lie?

SECTION B(Question no 5 to 8 carry 2 marks each)

5. Express $1.32\bar{3}$ in the form of p/q , where p and q are integers, $q \neq 0$.
6. Find two irrational numbers between $2/5$ and $3/4$.
7. Find the value of a if $(x-a)$ is a factor of $x^3 - ax^2 + 2x + a - 1$.

8. Factorise : $9X^2 - 12X + 3$

SECTION C (Question no 9 to 12 carry 3 marks each)

9. Plot the points $(2, 3)$, $(-2, 3)$, $(-2, -3)$ and $(2, -3)$ on a graph paper. Join these points in the sequence. Name the figure so obtained.
10. Represent $\sqrt{9.4}$ on the number line.
11. Evaluate $(997)^3$ using a suitable identity.
12. If $a+b+c=9$ and $ab+bc+ca=29$ find the value of $a^2+b^2+c^2$.

SECTION D (Question numbers13 TO 16 carry 4 marks each)

13. Factorize: $x^3 - 3x^2 - 10x + 24$
14. Find the value of 'a' if $\frac{5+2\sqrt{3}}{7+4\sqrt{3}} = a - 6\sqrt{3}$
15. Show that $a^3 + b^3 + c^3 - 3abc = \frac{1}{2} (a + b + c) [(a - b)^2 + (b - c)^2 + (c - a)^2]$.
16. Points A $(5, 4)$, B $(-3, 4)$ and D $(5, -4)$ are three vertices of a square ABCD. Plot these points on a graph paper and hence find the coordinates of the vertex C.