CLASS TEST

POLYNOMIAL **FM = 16**

1. If x + y = 3, $x^2 + y^2 = 5$ then xy is

a) 1 b) 3 c) 2 d) 5 **1**

2. Find x if $2^{x-7} \times 5^{x-4} = 1250$.

a) 6 b) 8 c) 10 d) 12 **1**

3. Assertion: The value of $(28)^3 + (-15)^3 + (-13)^3$ is 16380.
Reason: If $a + b + c = 0$, then $a^2 + b^2 + c^2 = 3abc$ **1**

4. Assertion: Sum of two irrational numbers 2 + V3 and 4 + V3 is irrational number.
Reason: Sum of two irrational numbers is always an irrational number. **1**

a) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion
b) Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.
c) assertion is true but the reason is false.
d) Both assertion and reason are false.

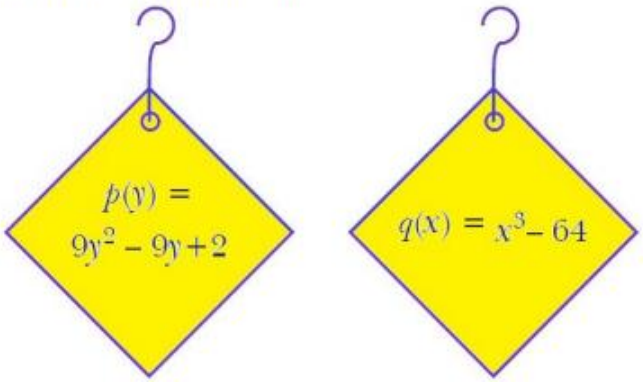
5. If p(x)=$x^3 + 3x^2 - 2x + 4$, then find p(2) + p(-2) - p(0). **2**

6. Express 1.8181… in the form $\frac{p}{q}$ where p and q are integers and q ≠ 0. **2**

7. Find the value of k for which the cubic polynomial $3y^3 - \frac{3}{2}y^2 + ky + 5$ is exactly divisible by $(y - \frac{1}{2})$. **2**

8. If $t + \frac{1}{t} = 8$, then find the value of $t^3 + \frac{1}{t^3}$. **3**

9. A school organised a mathematics exhibition in the school permises. Children of all classes made various models and games to depict the use of mathematics in daily life. To make the decoration more attractive, they made hangings related to mathematics one of the students made two hangings with polynomials written on them.



(a) Find the factors of polynomial q(x).

(b) Find the factors of polynomial p(y).

(c) Find the value of value of p(-2). **3**