ΣXEMPLAR POINT ΣP PVT. LTD.

A Complete Institute For Students

CREATING AND SETTING EXAMPLES FOR FUTURE...

IX MATHS TEST ON NUMBER SYSTEM, POLYNOMIALS

TIME: 1 HOURS **M.M.: 25**

1. If $\dfrac{\sqrt{7}-1}{\sqrt{7}+1} - \dfrac{\sqrt{7}+1}{\sqrt{7}-1} = a + b\sqrt{7}$, find the values of a and b. **3**

2. Simplify : $2\sqrt[3]{40} + 3\sqrt[3]{625} - 4\sqrt[3]{320}$. **3**

3. The polynomials $ax^3 + 3x^2 - 13$ and $2x^3 - 5x + a$ are divided by $(x + 2)$. If the remainder in each case is the same, find the value of a. **3**

4. Find the remainder when $4x^3 - 3x^2 + 2x - 4$ is divided by $(x - 2)$. **3**

5. Write in expanded form : **3**

   a. $(3x + 2y - z)^2$ **b.** $(px + 2y)^3$

6. Factorise using identity : $4x^2 + 4xy + y^2$ **3**

7. Show that $\dfrac{\left(x^{a+b}\right)^2 \cdot \left(x^{b+c}\right)^2 \left(x^{c+a}\right)^2}{\left(x^a\ x^b\ x^c\right)^4} = 1$. **3**

8. Evaluate : $\sqrt{5 + 2\sqrt{6}} + \sqrt{8 - 2\sqrt{15}}$ **4**