

**Riviera International Academy**

**Revision Assignment-2078**

**Day 6 (Jestha20, 2078, Thursday)**

**Class: Ten**

**Subject - Social Studies**

Read, Genealogy, Family tree

**Subject- HPE**

**Short notes on**

- 1) Air pollution
- 2) Waste management
- 3) Human waste

**Subject – English**

Read the poem 'The Past and Present'.

**Subject – Opt. Maths**

**Function:**

1. Define Composite Function.
2. If  $f$  and  $g$  are any two functions defined by  $f = \{(1, 2), (3, 5), (4, 1)\}$  and  $g = \{(2, 3), (5, 1), (1, 3)\}$ . Find the composite function  $gof$ .
3. If 5 is the pre-image of 'a' and 9 is the image of 'b' under the function  $f(x) = 2x - 3$ . Find the values of a and b.
4. If  $f(x) = 2x + 3$  and  $g(x) = x^2 + 1$ , find the value of  $fog(x)$  and  $gof(x)$ .
5. If  $f(x) = 2x^2 - 3$  and  $g(x) = 3x - 2$ , find  $fog(x)$  and  $gof(x)$ .
6. If  $f(x) = 4x + 5$  and  $g(x) = 8x - 7$ , find  $fog(x)$  and  $gof(x)$ .
7. If  $f(x) = x + 3$  and  $g(x) = x^2 - x + 1$ , find  $fog(x)$  and  $gof(x)$ .
8. If  $f(x) = -2x + 5$  and  $g(x) = 1 - x$ , find  $fog(x)$  and  $gof(x)$ .
9. If  $f(x) = x^5 + 1$  and  $g(x) = -x^{10} + 1$ , find  $fog(x)$  and  $gof(x)$ .
10. If  $h(x) = \frac{3x-5}{5}$ , find  $hoh(x)$ .
11. If  $k(x) = \frac{x+1}{2}$  and  $g(x) = \frac{3x-1}{2}$ , find  $gok(x)$  and  $kog(x)$ .

12. If  $f(x) = \frac{3x-1}{5}$  and  $p(x) = \frac{5x-3}{2}$ , find  $fop(x)$  and  $pof(x)$ .

13. If  $h(x) = \frac{5x-7}{3}$  and  $k(x) = \frac{-2-x}{5}$ , find  $hok(x)$  and  $koh(x)$ .

14. If  $f(x) = x + 5$ ,  $g(x) = 2x - 3$  and  $h(x) = 5x - 1$ , find  $fgh(x)$ ,  $gfh(x)$ .

15. If  $f(x) = x + 5$ ,  $g(x) = 3 - 2x$  and  $h(x) = 1 - 5x$ , find  $fgh(x)$ ,  $gfh(x)$ .

16. If  $f(x) = 2x + 3$ ,  $g(x) = \frac{2x-3}{2}$  and  $h(x) = \frac{1-5x}{3}$ , find  $fgh(x)$ ,  $ffh(x)$  and  $ghh(x)$ .

## Subject – Mathematics

Complete 8.2

**EXERCISE 8.2**

**General section**

1. Find the L.C.M. of the following expressions.

a)  $3x(x+1)(x-1)$  and  $2x^2(x-1)(x+3)$   
 b)  $4x^3(x-3)(x+2)$  and  $6x^2(x+2)(x+3)$   
 c)  $8a^2b(a-b)(a^2+ab+b^2)$  and  $12ab^2(a-b)(a+b)$   
 d)  $(x+2)(x+3)$ ,  $(x+3)(x-2)$ ,  $(x-2)(x-3)$   
 e)  $(a-3)(a-4)$ ,  $(a-4)$ ,  $(a-5)$ ,  $(a-5)(a-3)$

2. Find the L.C.M. of the following expressions.

a)  $3x^2 + 6x$ ,  $2x^3 + 4x^2$       b)  $ax^2 + ax$ ,  $ax^2 - a$       c)  $4x^2y^4 + 2x^4y^3$ ,  $10x^4y^3 + 5x^2y^4$   
 d)  $x^2 - xy$ ,  $x^3y - xy^3$       e)  $4x^2 - 2x$ ,  $8x^3 - 2x$       f)  $a^3 - b^3$ ,  $a^2 + ab + b^2$   
 g)  $x^2 + 5x + 6$ ,  $x^2 - 4$       h)  $x^2 - 9$ ,  $3x^3 + 81$       i)  $a^4b - ab^4$ ,  $a^4b^2 - a^2b^4$   
 j)  $x^4 + x^2y^2 + y^4$ ,  $x^3 - y^3$       k)  $a^4 + a^2b^2 + b^4$ ,  $a^3 + b^3$       l)  $6x^2 - x - 1$ ,  $54x^3 + 2x$

**Creative Section**

3. Find the L.C.M. of the following expressions.

a)  $a^2 - 4$ ,  $a^3 - 8$ ,  $(a+2)^2$       b)  $(a-3)^2$ ,  $a^2 - 9$ ,  $a^3 + 27$   
 c)  $a^3 - 2a^2 + a$ ,  $a^3 + a^2 - 2a$ ,  $a^3 - 4a$       d)  $x^4 - y^4$ ,  $x^2 - y^2$ ,  $x^3 - y^3$   
 e)  $4x^3 - 10x^2 + 4x$ ,  $3x^4 - 8x^3 + 4x^2$ ,  $x^4 - 8x$       f)  $x^3 - 9x$ ,  $x^4 - 2x^3 - 3x^2$ ,  $x^3 - 27$   
 g)  $a^3 - 4a$ ,  $a^4 - a^3 - 2a^2$ ,  $a^3 - 8$       h)  $a^4 + a^2 + 1$ ,  $a^3 - 1$ ,  $a^3 - a^2 + 1$   
 i)  $a^2 + 2ab + b^2 - c^2$ ,  $b^2 + 2bc + c^2 - a^2$ ,  $c^2 + 2ca + a^2 - b^2$   
 j)  $x^3 - 2x^2y + 2xy^2 - y^3$ ,  $x^4 - y^4$ ,  $x^3 + y^3$   
 k)  $x^2 + 3x + 2$ ,  $x^2 + 5x + 6$ ,  $x^2 + 4x + 3$   
 l)  $2x^3 + 2x^2 - 12x$ ,  $6x^3 - 6x^2 - 72x$ ,  $4x^3 - 24x^2 + 32x$

MINOTE 9

The End.