

# Riviera International Academy

## Assignment-2077

(Ashwin 12, 2077, Monday)

Class: Nine

### Subject- Mathematics

Source: Photos of exercise are given below.

Work: complete all the exercises from given below.

Do your work neatly

#### Creative section - B

6. Simplify.

$$a) \frac{1}{x} - \frac{2}{x+1} + \frac{1}{x+2}$$

$$b) \frac{1}{x+1} - \frac{1}{x-1} + \frac{3}{x^2-1}$$

$$c) \frac{x}{x+2} + \frac{x}{x-2} - \frac{4x}{x^2-4}$$

$$d) \frac{2xy}{x^2-y^2} - \frac{x-y}{x+y} + \frac{x+y}{x-y}$$

$$e) \frac{x+1}{2x^2-4x^2} + \frac{x-1}{2x^2+4x^2} - \frac{1}{x^2-4}$$

$$f) \frac{1}{2a-2x} - \frac{1}{2a+2x} - \frac{x}{a^2+x^2}$$

7. Simplify.

$$a) \frac{1}{(x-3)(x-4)} + \frac{1}{(x-4)(x-5)} + \frac{1}{(x-5)(x-3)}$$

$$b) \frac{2(a-3)}{(a-4)(a-5)} + \frac{a-1}{(3-a)(a-4)} + \frac{a-2}{(5-a)(a-3)}$$

$$c) \frac{2}{x^2-5x+6} - \frac{2}{x^2-4x+3} + \frac{1}{x^2-3x+2}$$

$$d) \frac{x-1}{x^2-3x+2} + \frac{x-2}{x^2-5x+6} + \frac{x-5}{x^2-8x+15}$$

$$e) \frac{2y+5}{y^2+6y+9} + \frac{11}{y^2-9} - \frac{16y}{8y^2-24y}$$

8. Simplify.

$$a) \frac{x-y}{x^2-xy+y^2} + \frac{x+y}{x^2+xy+y^2} + \frac{2y^3}{x^4+x^2y^2+y^4}$$

$$b) \frac{a-2}{a^2-2a+4} + \frac{a+2}{a^2+2a+4} - \frac{16}{a^4+4a^2+16}$$

$$c) \frac{x+3}{x^2+3x+9} + \frac{x-3}{x^2-3x+9} - \frac{54}{x^4+9x^2+81}$$

$$d) \frac{a+2}{1+a+a^2} - \frac{a-2}{1-a+a^2} - \frac{2a^2}{1+a^2+a^4}$$

9. Simplify.

$$a) \frac{(x-y)^2-z^2}{x^2-(y+z)^2} + \frac{(y-z)^2-x^2}{y^2-(z+x)^2} + \frac{(z-x)^2-y^2}{z^2-(x+y)^2}$$

$$b) \frac{a^2-(b-c)^2}{(c+a)^2-b^2} + \frac{b^2-(c-a)^2}{(a+b)^2-c^2} + \frac{c^2-(a-b)^2}{(b+c)^2-a^2}$$

## **Subject-HPE**

Homework will be given in Google classroom.

## **Subject- Computer**

**Answer the following questions:**

- a) What is hyperlink? List the types of hyperlinks in HTML.
- b) What is text formatting tag. Write the HTML codes to demonstrate the text formatting tags.
- c) Write the use the following HTML tags and list their attributes.
  - i) <marquee>
  - ii) <a>
  - iii) <font>

## **Subject- Science**

1. There is no gain in mechanical advantage in a single fixed pulley. Explain why the pulley is then used?
2. What should be done to lift the same load by applying less effort on an incline plane?
3. What is meant by an ideal machine? Does it exist practically? Justify your answer.
4. 1500N load is lifted by using incline plane of height 3m. Calculate the length of the incline plane if it needed 500N effort and it's VR 5. Also calculate mechanical advantage, input work and output work.

**The End.**