

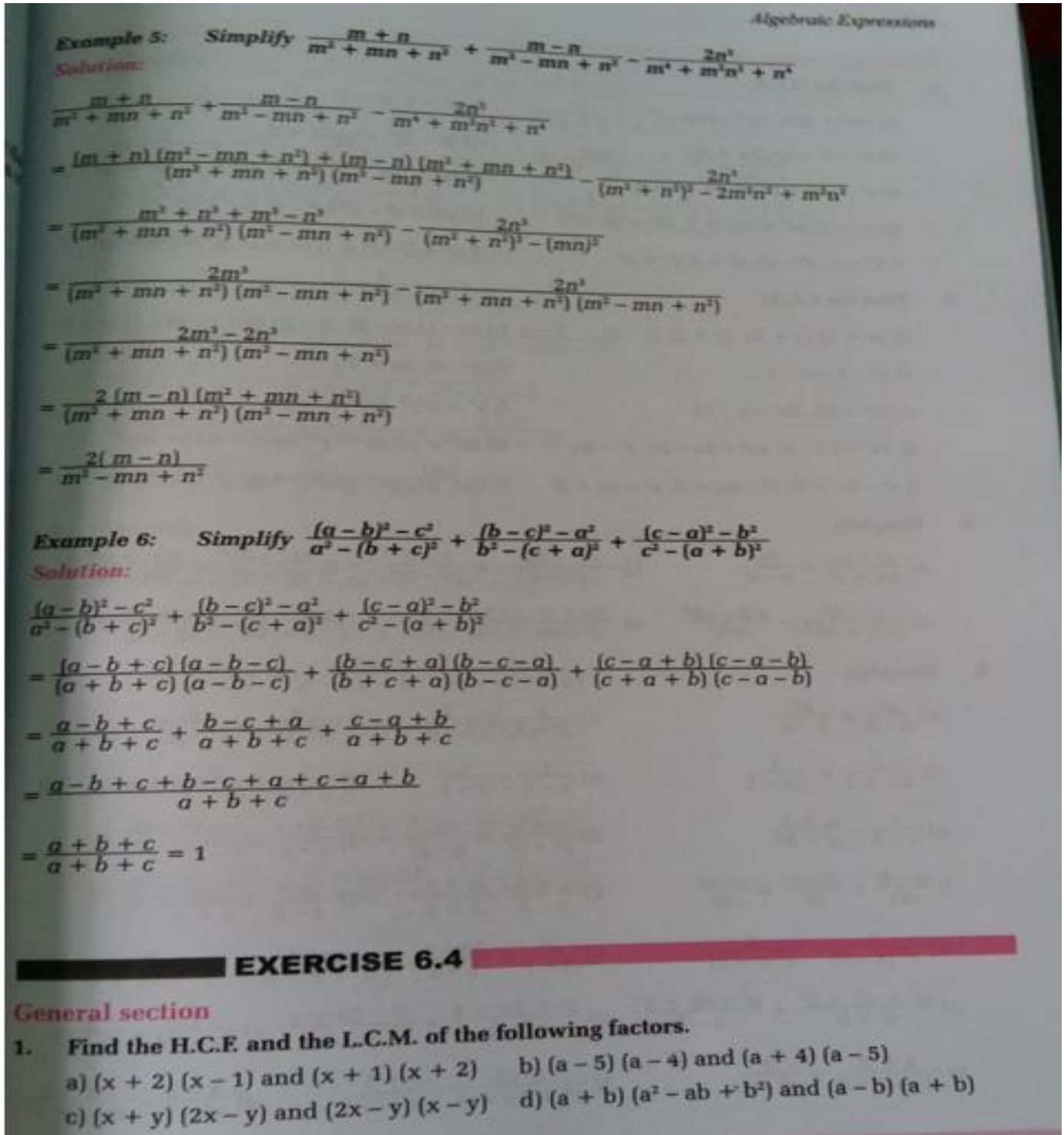
Class: Nine

Subject- Mathematics

Source: Photos of exercise are given below.

Work: Complete all exercise of 6.4.

Do your work neatly



Creative section - A

2. Find the H.C.F.

a) $ax^2 + 2ax, ax^2 - 4ax$

c) $a^2 - 8, a^2 + 2a + 4$

e) $x^2 + 5x + 6, x^2 - 4, x^2 + 8$

g) $m^3 - 1, m^4 + m^2 + 1, m^2 + m + 1$

i) $x^2 - y^2, x^6 - y^6, x^4 + x^2y^2 + y^4$

b) $x^2 - 1, x^2 - 1$

d) $(x - 1)^2, x^2 - 3x + 2$

f) $2x^2 + 5x + 2, 3x^2 + 8x + 4, 2x^2 + 3x$

h) $2x^2 - x^2 - x, 4x^4 - x, 8x^4 + x$

j) $a^3 + b^3, a^4 + a^2b^2 + b^4, a^4 - a^2b + ab^4$

3. Find the L.C.M.

a) $(x + 1)(x + 2), (x + 2)(x - 2)$

c) $x^2 - 1, x^2 - 1$

e) $4x^2 - 25, 2x^2 - x - 15$

g) $2x^2 - 3x - 9, 4x^2 - 5x - 21, x^3 - 9x$

i) $x^2 - 5x + 6, x^2 - 4x + 3, x^2 - 3x + 2$

b) $(x - 1)(x - 2), (x - 2)(x - 3), (x - 3)(x - 4)$

d) $x^2 - 9, 3x + 9$

f) $x^4 + x^2y^2 + y^4, x^3 - y^3$

h) $8x^4 + y^4, 8x^4 - y^4, 16x^4 + 4x^2y^2 + y^4$

j) $x^2 + 27, 2x^3 - 6x^2 + 18x, x^3 - 3x + 9$

4. Simplify.

a) $\frac{x^2 - a^2}{ax + a^2} \times \frac{7a}{x - a}$

b) $\frac{4y^2 - 9z^2}{y^2 - 4} \times \frac{y - 2}{2y - 3z}$

c) $\frac{4a^2 - 9b^2}{x^2 - y^2} \times \frac{x^2y + xy^2}{4a - 6b}$

d) $\frac{a^2 - b^2}{a^2b + ab^2} + \frac{a^2b - ab^2}{a^2b^2}$

e) $\frac{2x + 6}{x^2 - 9} + \frac{3x^2 + 9x}{2x^3 - 6x}$

f) $\frac{a^2 - 4b^2}{a^2 - 9x^2} + \frac{a + 2b}{a - 3x}$

5. Simplify.

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

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

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

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

e) $\frac{1}{x - 2} - \frac{1}{x - 1}$

f) $\frac{1}{y - 3} - \frac{2}{2y - 1}$

g) $\frac{1}{a - b} - \frac{a + b}{a^2 - b^2}$

h) $\frac{p + q}{p^2 - q^2} + \frac{1}{q - p}$

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

j) $\frac{a - b}{ab} + \frac{b - c}{bc} + \frac{c - a}{ca}$

k) $\frac{x + 2}{x - 2} - \frac{x - 2}{x + 2}$

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

m) $\frac{1}{y^2(x - y)} - \frac{1}{x^2(x - y)}$

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

o) $\frac{1}{y^2 - 4} + \frac{3}{y^2 + 5y + 6}$

p) $\frac{a^2 + ab + b^2}{a + b} + \frac{a^2 - ab + b^2}{a - b}$

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

r) $\frac{1}{(a - b)^2} - \frac{1}{a^2 - b^2}$

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

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

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

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

1) Answer the following questions:

- a) What is the Internet? List any two services of the Internet.
- b) What is World Wide Web?
- c) Define web page and web site.
- d) What is web server? List any two websites.
- e) What is web browser? List any four popular web browsers.
- f) List the attributes of <body> and tags.

Subject- Science

1. Define lever? State its principle.
2. Which lever has MA always greater than one and why?
3. Third class lever cannot multiply applied effort but why does it useful in our daily life?
4. A first class lever is used to lift 500N load by applying 200N force. If the load is kept at 20cm from fulcrum and effort is applied at 60 cm from fulcrum calculate its MA, VR and efficiency

The End.