ALGEBRA

1st

RETROALIMENTACIÓN
TOMO I

SACO OLIVEROS

1. Efectúe en cada caso

RESOLUCIÓN

a. $(+7)-(+14)=+7-14=-7$

b. $(-20)-(-30)=-20+30=+10$

c. $(-2021)-(-2021)=-2021+2021=0$

d. $(+11)+(-18)=+11-18=-7$

2. Efectúe M+N si :

$$M = (-8) + (+5)$$

$$N = -48 \div 8$$

RESOLUCIÓN

$$M = (-8) + (+5)$$

$$M = -3$$

$$N = -48 \div 8$$

$$N = -6$$

Piden :

$$M + N = -3 - 6 = -9$$

$$\therefore M + N = -9$$

3. Halle el valor de

$$Q = (13)(-2) + 7(9) - (-5)(+6)$$

Sabiendo que representa la edad de Christian hace 5 años. ¿Cuál será su edad dentro de 2 años?

RESOLUCIÓN

$$Q = (13)(-2) + 7(9) - (-5)(+6)$$

$$Q = -26 + 63 + 30$$

$$Q = -26 + 93$$

$$Q = +67$$

Edad actual = $67 + 5$

Edad actual $= 72$

$\therefore$ Christian tendrá 74 años

4. Sabiendo que :

$A = (-8)(+2)(-4)$

$B = (-16) \div (-2)$

$C = (-4)^2 - (-4)^3$

Calcule

$$\sqrt[-5]{C - (A + B)}^{B}$$

RESOLUCIÓN

$A = (-8)(+2)(-4)$

$A = +64$

$B = (-16) \div (-2)$

$B = +8$

$C = (-4)^2 - (-4)^3$

$C = +16 - (-64)$

$C = 16 + 64$

$C = 80$

Piden :

$$8 - \sqrt[5]{80 - (64 + 8)}$$

$$\sqrt[3]{80 - 72}$$

$$\sqrt[3]{8}$$

$\therefore 2$

5. El valor de

$$P = \frac{3}{8} + \frac{2}{3} - \frac{1}{6}$$

es

RESOLUCIÓN

$mcm(8; 3; 6) = 24$

$$24(P) = \cancel{24}\left(\frac{3}{8}\right) + \cancel{24}\left(\frac{2}{3}\right) - \cancel{24}\left(\frac{1}{6}\right)$$

$$24P = 3(3) + 8(2) - 4(1)$$

$$24P = 9 + 16 - 4$$

$$24P = 21$$

$$P = \frac{\cancel{21}^{7}}{\cancel{24}_{8}}$$

$$\therefore P = \frac{7}{8}$$

6.

Efectúe

$$M = \left(\frac{5}{4}\right) \div \left(\frac{15}{8}\right) + \left(-\frac{2}{7}\right)\left(\frac{21}{14}\right)$$

RESOLUCIÓN

$$M = \left(\frac{5}{4}\right) \div \left(\frac{15}{8}\right) + \left(-\frac{\overset{1}{\cancel{2}}}{\underset{1}{\cancel{7}}}\right)\left(\frac{\overset{3}{\cancel{21}}}{\underset{7}{\cancel{14}}}\right)$$

$$M = \left(\frac{\overset{1}{\cancel{5}}}{\underset{1}{\cancel{4}}}\right) \times \left(\frac{\overset{2}{\cancel{8}}}{\underset{3}{\cancel{15}}}\right) - \left(\frac{3}{7}\right)$$

$$M = \frac{2}{3} - \frac{3}{7}$$

$$M = \frac{14 - 9}{21}$$

$$M = \frac{5}{21}$$

$$\therefore M = \frac{5}{21}$$

7.

Resuelve

$$A = \frac{5}{7} + \frac{18}{13} + \frac{2}{8} + \frac{9}{7} - \frac{5}{13} + \frac{14}{8}$$

RESOLUCIÓN

$$A = \frac{5}{7} + \frac{18}{13} + \frac{2}{8} + \frac{9}{7} - \frac{5}{13} + \frac{14}{8}$$

$$A = \frac{5}{7} + \frac{9}{7} + \frac{18}{13} - \frac{5}{13} + \frac{2}{8} + \frac{14}{8}$$

$$A = \frac{14}{7} + \frac{13}{13} + \frac{16}{8}$$

$$A = 2 + 1 + 2$$

$$\therefore A = 5$$

8.

Resuelva

$$\frac{x+2}{5}+\frac{x-3}{2}=\frac{x+5}{4}$$

RESOLUCIÓN

$mcm(5;2;4) = 20$

$$\cancel{20}\left(\frac{x+2}{\cancel{5}}\right)+\cancel{20}\left(\frac{x-3}{\cancel{2}}\right)=\cancel{20}\left(\frac{x+5}{\cancel{4}}\right)$$

$$4(x+2)+10(x-3)=5(x+5)$$

$$4x+8+10x-30=5x+25$$

$$14x-22=5x+25$$

$$14x-5x=25+22$$

$$9x=47$$

$$x=\frac{47}{9}$$

$$\therefore C.S=\left\{\frac{47}{9}\right\}$$

9.

Calcule el valor de “x” en:

$5x + 7 - x = 13x - 29 - 11x$

RESOLUCIÓN

$$5x + 7 - x = 13x - 29 - 11x$$

$$4x + 7 = 2x - 29$$

$$4x - 2x = -29 - 7$$

$$2x = -36$$

$$x = -18$$

$$\therefore x = -18$$

10.

Halle el valor de “x” en:

$$\frac{5x-2}{7}=\frac{2x+4}{4}$$

RESOLUCIÓN

$$\frac{5x-2}{7} \times \frac{2x+4}{4}$$

$$20x-8=14x+28$$

$$6x=36$$

$$x=6$$

$$\therefore x=6$$