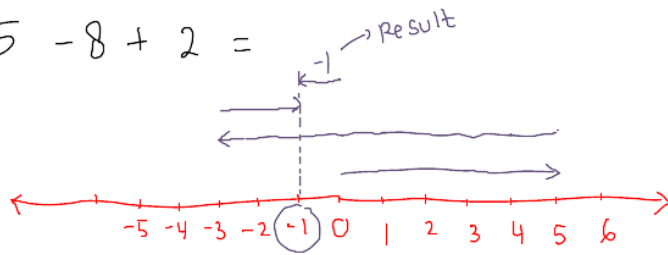


① Draw a number line to illustrate the result

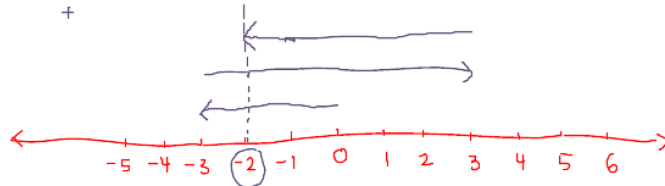
a)

$$5 - 8 + 2 =$$



b)

$$-3 - (-6) - 5 =$$



② Evaluate :

$$\begin{aligned} \text{a) } 18.9 \times (0.8 \div 2 + 5.4 \div 3) &= \\ &= 18.9 \times (0.4 + 1.8) \\ &= 18.9 \times 2.2 = 41.58 \end{aligned}$$

$$\text{b) } \frac{12}{13} \times \frac{4}{15} \times \frac{13}{14} \div 4 =$$

$$\frac{\cancel{12}^2}{\cancel{13}} \times \frac{\cancel{4}}{\cancel{15}_5} \times \frac{\cancel{13}}{\cancel{14}_7} \times \frac{1}{4} = \frac{2}{35}$$

③ Write 2307.69273 correct to :

a) 3 dp = 2307.693

b) 5 sf = 2307.7 → 2307.7000

c) nearest hundred = 2300

d) nearest ten = 2310

e) nearest hundredth = 2307.69

f) nearest integer = 2308

④ Calculate =

a) $\frac{3}{6}$ of 1200 = $\frac{3^1}{6^2} \times 1200^6 = 600$

b) $3\frac{1}{3}\%$ of 900 lt = $\frac{10}{300} \times 900 \text{ lt} = 30 \text{ lt}$
 $\downarrow \frac{10}{3} \uparrow$

c) 3 out of 6 = $\frac{3}{6} = \frac{1}{2} = 0.5$

d) 0.75 of 24 = $\frac{75^3}{100^4} \times 24^6 = 18$

⑤ Simplify Ratio into the simplest one.

a) $\frac{39}{13} : \frac{52}{13} : \frac{104}{13} = 3 : 4 : 8$

b) $\frac{63}{9} : \frac{54}{9} = 7 : 6$
 $\rightarrow 12 : 10 = 6 : 5$

c) $\left(\frac{4}{5}\right)_{\times 15} : \left(\frac{2}{3}\right)_{\times 15} = \sqrt{* \text{ Because 15 is LCM of 5 \& 3 KPK}}$

d) $10\% : \frac{1}{3} = \left(\frac{1}{10}\right)_{\times 30} : \left(\frac{1}{3}\right)_{\times 30} = 3 : 10$

e) 4 hours : 1 day = $1 : 6$
 $\downarrow \begin{matrix} 24 \text{ hours} \end{matrix}$

⑥ Find the value of x in ratio

a) $15 : 24 = x : 8$

$24 \times x = 15 \times 8$

$24x = 15 \times 8$

$x = \frac{15 \times 8^1}{24^3}$

$= 5$

b) $2.5 : x = 14 : 21$

$14 \times x = 2.5 \times 21$

$x = \frac{2.5 \times 21^3}{14^2} = \frac{7.5}{2} = 3.75$

⑦ \$ 1200 is shared among three people in
 ratio $\overset{A}{2} : \overset{B}{5} : \overset{C}{3}$

a) Find the money of each person

$$A = \frac{2}{10} \times \$1200 = \$240$$

$$B = \frac{5}{10} \times \$1200 = \$600$$

$$C = \frac{3}{10} \times \$1200 = \$360$$

b) Find the largest different money between two people
 $= \$600 - \$240 = \$360$

⑧ Given ratio $x : y = 5 : 7$

and $x : z = 2 : 3$

Find $x : y : z$

$$x : y = (5 : 7) \times 2$$

$$x : z = (2 : 3) \times 5$$

$$x : y : z = 10 : 14 : 15$$

⑨ A machine prints 1500 newspapers in 45 minutes.

How many does it produce in 12 hours?

$$\downarrow \\ 12 \times 60 = 720 \text{ minutes}$$

$$1500 \text{ np} : 45 \text{ mins} = x : 720 \text{ mins}$$

$$45 \times x = 1500 \times 720$$

$$x = \frac{1500 \times 720}{45} = 24000 \text{ np}$$

10) Expand & Simplify

$$a) 2(p-3) = 2p - 6$$

$$b) -3(u+5) - 4(3u-2) =$$

$$= -3u - 15 - 12u + 8$$

$$= -15u - 7$$

$$c) \frac{3(4-2u)}{5} - \frac{4(3u-1)}{3} =$$

$$= \frac{12-6u}{5} - \frac{12u-4}{3} \quad \Bigg| \quad = \frac{36-18u-60u+20}{15}$$

$$= \frac{3(12-6u)}{15} - \frac{5(12u-4)}{15} \quad \Bigg| \quad = \frac{56-78u}{15}$$

$$= \frac{36-18u}{15} - \frac{60u-20}{15} \quad \Bigg| \quad =$$

$$= \frac{36-18u-(60u-20)}{15} \quad \Bigg| \quad =$$

$$d) \frac{2u}{5} + \frac{3u}{4} - \frac{4u-9}{2} =$$

$$= \frac{4(2u)}{20} + \frac{5(3u)}{20} - \frac{10(4u-9)}{20}$$

$$= \frac{8u}{20} + \frac{15u}{20} - \frac{40u-90}{20}$$

$$= \frac{23u - (40u-90)}{20}$$

$$= \frac{23u - 40u + 90}{20} = \frac{-17u + 90}{20} //$$