

Q# 1

In a class, the number of boys is more than the numbers of girls by 12% of the total strength of the class. Find the ratio of boys & girls.

Sol

let suppose boys to be = x

Girls to be = y

Total strength of class = boys + girls = $x + y$

$$x = y + 12\% (x + y)$$

$$x = y + \frac{12}{100} (x + y)$$

$$x = y + \frac{3}{25} (x + y)$$

$$x = y + \frac{3x + 3y}{25}$$

$$x = \frac{25y + 3x + 3y}{25}$$

$$25x = 28y + 3x$$

$$25x - 3x = 28y$$

$$22x = 28y$$

$$\frac{x}{y} = \frac{28}{22}$$

$$\frac{x}{y} = \frac{14}{11}$$

$$\Rightarrow x : y = 14 : 11$$

write the final answer in the form of statement.

Q#2

Find the ratio of 3.5kg to 280grams.

$$3.5 \text{ kg} = 3.5 \times 1000 = 3500 \text{ g}$$

$$= 3500 \text{ g} : 280 \text{ g}$$

$$= \frac{3500}{280}$$

4

25

$$= \frac{25}{4}$$

M

$$= \frac{25}{2}$$

\Rightarrow

$$25 : 2$$

Q#3

Two numbers are in the ratio 3:4.

If 6 is added to each term of the ratio, there is an increase of 20 percent in the given ratio. Find the first and second number.

Sol:

Let's the 1st no. to be = $3x$

2nd no. to be = $4x$

According to the statement

$$3x + 6 : 4x + 6 = \frac{3 + (20\% \times \frac{3}{4})}{4}$$

$$\frac{3x + 6}{4x + 6} = \frac{3}{4} + \frac{20(3)}{100(4)}$$

$$\frac{3x+6}{4x+6} = \frac{3}{4} + \frac{3}{20}$$

$$\frac{3x+6}{4x+6} = \frac{5 \times 3 + 3 \times 1}{20}$$

$$\frac{3x+6}{4x+6} = \frac{15+3}{20}$$

$$\frac{3x+6}{4x+6} = \frac{18}{20}$$

$$20(3x+6) = 18(4x+6)$$

$$60x + 120 = 72x + 108$$

$$120 - 108 = 72x - 60x$$

$$12 = 12x$$

$$x = 1$$

$$\text{the first no.} = 3(x)$$

$$\therefore x = 1$$

$$\text{So, } 3x = 3(1) = 3$$

$$\text{2nd no.} = 4x$$

$$= 4(1) = 4$$

$$3x = 4$$

$$3(1) : 4(1)$$

$$\boxed{3 : 4}$$

QUESTION #1

14 cows eat 63 kg grass in 18 days. How many cows will eat 770 kg grass in 28 days?

Days	(kg) Grass	cows
18	63	14
28	770	$x = ?$

$$\frac{x}{14} = \frac{55}{7} \times \frac{18}{28}$$

(Note: The original image shows a complex fraction with 110, 770, 63, 7, 18, 28, 14, and 7. This is a simplified version of that calculation.)

$$\frac{x}{14} = \frac{55}{7}$$

$$x = \frac{55 \times 14^2}{7}$$

$$x = 110 \text{ days}$$

Q#2

A food factory manufactures 560 fans in 7 days with 20 machines. How many fans would be manufactured in 12 days with 18 machines?

Days	Machines	Fans
7	20	560
12	18	x

$$\frac{x}{560} = \frac{18}{20} \times \frac{12}{7}$$

$$\frac{x}{560} = \frac{54}{35}$$

$$x = \frac{54 \times 560}{35}$$

$$x = \frac{6048}{7}$$

$$x = 864 \text{ Fans}$$

upload one question for assignment and evaluation

Q#3

work on the mistakes and then attempt others.

The cost of 16 packets of salt, each weighting 900grams in 84 dollars. What will be the cost of 27 packets of salt each weighting 1kg?

$$\therefore 1 \text{ kg} = 1000 \text{ grams}$$

Packets	weight of salt	cost
16	900g	84
27	1000g	x

$$\frac{x}{84} = \frac{27}{16} \times \frac{1000}{9000}$$

$$\frac{x}{84} = \frac{15}{8}$$

$$x = \frac{15}{8} \times 84$$

$$x = \frac{315}{2}$$

$$x = 157.5 \$$$

$$\begin{array}{r} 21 \\ \times 15 \\ \hline 105 \\ 21 \times \\ \hline 315 \end{array}$$

$$\begin{array}{r} 157.5 \\ 2 \overline{) 315} \\ \underline{2} \\ 11 \\ \underline{10} \\ 15 \\ \underline{14} \\ 10 \\ \underline{10} \\ 0 \end{array}$$

Q#4

If 270 kg of corn would feed 42 horses for 21 days, for how many days would 360 kg of it feed 21 horses?

Corn(kg)	Horses	Days
↑ 270	42	21 ↑
360	↓ 21	x

26

$$x = \frac{240}{3} \times 7$$

$$x = 560 \text{ days}$$

$$\frac{x}{21} = \frac{42}{21} \times \frac{360}{9}$$

$$\frac{x}{21} = \frac{24}{9}$$

$$x = \frac{24}{9} \times 21$$

$$x = 56 \text{ days.}$$

Q#1

Hamza spends 20% of his total income on house rent, 70% on domestic expenditure. If his saving is Rs 18000. (a) What will be his total income?

- (b) Change into fraction 70%.
- (c) Find 15% of 600.

(a) Total income of Hamza

Let suppose Total income to be = x

Hamza spends 20% of his total income
on house rent = $20\% x$

$$= \frac{20}{100} (x)$$

$$= \frac{x}{5}$$

Hamza spends 70% on domestic
expenditure = $\frac{70}{100} (x)$

$$\text{Saving} = \frac{7x}{10} = \text{Rs. } 18000$$

$$\text{Total income} = \text{Expenditure} + \text{Saving}$$

$$x = \frac{x}{5} + \frac{7x}{10} + 18000$$

$$x = \frac{2x + 7x + 18000(10)}{10}$$

$$x = \frac{9x + 180000}{10}$$

$$10x = 9x + 180000$$

$$10x - 9x = 180000$$

$$x = 180000 \text{ Rs.}$$

(b) Change into fraction 70%

$$70\%$$

$$= \frac{70}{100}$$

$$= \frac{7}{10}$$

(c) Find 15% of 600

$$= \frac{15}{100} (600)$$

$$= 90$$

Q#2

Which fraction is larger in the following?

(a) $\frac{7}{9}$, $\frac{1}{4}$, $\frac{13}{36}$

Multiply above fractions with suitable numbers

like 4, 9, 1

$$\frac{7 \times 4}{9 \times 4}, \frac{1 \times 9}{4 \times 9}, \frac{13 \times 1}{36 \times 1}$$

$$\frac{28}{36}, \frac{9}{36}, \frac{13}{36}$$

$\frac{7}{9}$ is the largest fraction

(b) Solve

$$(i) (7)^2 + x - (2 \times 4) \div 2$$

$$= 49 + x - (8) \div 2$$

$$= 49 + x - 4$$

$$= 45 + x$$

$$= x + 45$$

$$(ii) 9 + 3 + 3 \times 2$$

$$= 9 + 3 + 3 \times 2$$

$$= 9 + 3 + 6$$

$$= 18$$

$$(iii) \quad (x^2)^3 = ?$$

$$(x^2)^3 = x^6$$

$$(iv) \quad x^a \cdot x^b = ?$$

$$x^a \cdot x^b = x^{a+b}$$

$$(v) \quad \frac{x^{a+b}}{x^{c-d}} = ?$$

$$= x^{a+b} \cdot x^{-c+d} = x^{a+b-c+d}$$

Convert into meter : 10 cm

$$\because 1 \text{ meter} = 100 \text{ cm}$$

$$\because 1 \text{ cm} = 0.01 \text{ m}$$

$$= \frac{10 \text{ cm}}{100}$$

$$10 \text{ cm} = 0.1 \text{ m}$$