

Assignment #1
General Ability

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Question # 1

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

Solution of the Question:

Given Data :

- ① Quantity no 1 : cows
 - ② Quantity no 2 : grass
 - ③ Quantity no 3 : days
- } Compound proportion

To find :

number of cows for 770 kg ?

Formula :

∴ Arrow method

Solution :

Cows	grass	days
14 ↑	63 kgs ↑	18 ↓
x ↑	770 kgs ↑	28 ↓

$$\frac{x}{14} = \frac{770 \text{ kg}}{63} \times \frac{18}{28}$$

$$\frac{x}{14} \times 28 = \frac{110}{\cancel{770}} \times 18^2$$

~~63~~
~~21~~
~~7~~
1

$$\frac{x}{2} = 110 \times \frac{2}{2}$$

$$\boxed{x = 110 \text{ cows}}$$

∴ 110 cows will eat 770 kg grass in 28 days

←————→

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Question# 02

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

Given Data:

1. Quantity no 1 : fans
 2. Quantity no 2 : days
 3. Quantity no 3 : machines
- } Compound Proportion

Formula:

∴ Arrow method

Find:

no of fans to be manufactured in 12 days.

Solution:

days	machines	fans
7	20	560
12	18	x

$$x = \frac{18}{560} \times \frac{12}{7} \times \frac{63}{5}$$

$$x = \frac{18}{5} \times \frac{3}{7} \times \frac{16}{1}$$

$$x = 18 \times 3 \times 16$$

$$x = 864$$

$$\begin{array}{r} 18 \\ \times 16 \\ \hline 102 \\ 180 \\ \hline 288 \\ \times 3 \\ \hline 864 \end{array}$$

864 fans will be made in 12 days with 18 machines. **5**

Question no 3:

The price of 80 shirts is Rs 22000/- . What will be the price of 30 shirts?

Given data:

$$\text{Price of 80 shirts} = 22000$$

To find:

$$\text{Price of 30 shirts} = ?$$

formula:

unitary method

Solution:

$$\begin{aligned} 80 \text{ shirts} &= 22000 \\ 1 \text{ shirt} &= ? \end{aligned}$$

$$\begin{aligned} \text{Price of 1 shirt} &= \frac{1 \times 22000}{80} \\ &= \frac{22000}{80} \\ &= 275 \end{aligned}$$

$$\text{Price of 1 shirt} = 275$$

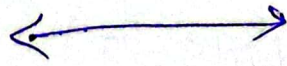
$$\begin{aligned} 1 \text{ shirt} &= 275 \\ 30 \text{ shirts} &= ? \end{aligned}$$

$$= 275 \times 30$$

$x = 8250$

$$\begin{array}{r} \textcircled{2} \textcircled{1} \text{ -} \\ 275 \\ \times 30 \\ \hline 000 \\ 825 \times \\ \hline 8250 \end{array}$$

Price of 30 shirts will be 8250/-



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Question #4a

Hamza spends 20% of his total income on house rent, 70% on domestic expenditure. If his saving is Rs. 18000, what will be his total income.

Given data:

Let the total income of Hamza = x

Now

$$x = 70\% (x) + \frac{20}{100}(x) + 18000$$

$$x = \frac{70}{100}(x) + \frac{20}{100}(x) + 18000$$

Multiplying both sides of the equation by 100

$$100x = 100 \left(\frac{70}{100}x \right) + \frac{20}{100}(100)x + 18000 \times 100$$

$$100x = 70x + 20x + 1800000$$

$$100x = 90x + 1800000$$

$$1800000 = 100x - 90x$$

$$1800000 = 10x$$

$$\boxed{x = 180000}$$

write the final answer in the form of statement.

Question # 4b

Change into fraction:

$$70\%$$

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

Simple	=	7
fraction		10

Answer
=

Question # 4c

Find 15% of 600

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

$$= 15 \times 6$$

$$\begin{array}{r} ③ \\ 15 \\ \times 6 \\ \hline 90 \end{array}$$

⇒	90
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Answer
=

Question # 5a

Which fraction is larger in the following

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

4	9-4-36
9	9-1-9
	1-1-1

Taking LCM of 9, 4, 36 = 36

Preparing for common denominator

$$\frac{7}{9} \times \frac{4}{4} = \frac{28}{36}$$

$$\frac{1}{4} \times \frac{9}{9} = \frac{9}{36}$$

$$\frac{13}{36} \times \frac{1}{1} = \frac{13}{36}$$

$$\frac{7}{9} > \frac{13}{36} > \frac{1}{4}$$

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

Answer

5b) Solve

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

BDMAS

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

$$= 49 + x - 4$$

$$= 45 + x$$

$$\boxed{x = -45}$$

b) $9 + 3 + 3 \times 2$

BDMAS

$$9 + 3 + 6$$

$$\boxed{= 18}$$

c) $(x^2)^3$

$$\boxed{= x^6}$$

d) $x^a \cdot x^b = ?$

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

$$\boxed{x^{a+b}}$$

$$x^{(a+b)-(c-d)}$$

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

e) Convert into meter

$$10 \text{ cm}$$

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

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

$$\Rightarrow 10 \times \text{cm}$$

$$\Rightarrow 10 \times \frac{1}{100} \text{ meter}$$

$$\Rightarrow \frac{1}{10} \text{ meter}$$

$$\Rightarrow 0.1 \text{ meter}$$