Question 1:-

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

Solution:-

Grass (kg)	days	No. of cows
63 ↑	18	14 ↑
770	28 ↓	x

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

$$x = \frac{13860}{1764} \times 14$$

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

Question No. 2

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

Sol

Days	No. of machines	Fans
7 ↑	20 ↑	560 ↑
12	18	x

$$\frac{x}{560} = \frac{\cancel{12}^{3}}{7} \times \frac{18}{\cancel{20}_{5}}$$

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

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

$$x = 864 \text{ fans.}$$

Question 3:-

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

Shirts : Price

$80 : 22000 :: 30 : x$

$$\frac{80}{22000} = \frac{30}{x}$$

$$80x = 22000 \times 30$$

$$x = \frac{22000 \times 30}{80}$$

$$\boxed{x = \text{Rs } 8250}$$

Question No: 4

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

We know,

Income = Expenditures + Savings

Let, total income = x.

x - expenditures = Savings.

$$x - \left(\frac{20}{100}x + \frac{70}{100}x\right) = 1800$$

$$x - \left(\frac{90x}{100}\right) = 1800$$

$$\frac{100x - 90x}{100} = 1800$$

$$\frac{10x}{100} = 1800$$

$$x = \frac{1800 \times 100}{10}$$

$$\boxed{x = 18000}$$

b) Change 70%. into fraction

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

c) Find 15% of 600.

$$\frac{15}{100} \times 600 = 90.$$

Q1 No:5

Which fraction is larger $\frac{7}{9}, \frac{1}{4}, \frac{13}{36}$

a)

$$\frac{7\times4}{9\times4}, \frac{1\times9}{4\times9}, \frac{13\times1}{36\times1}$$

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

So, 7/9 is largest fraction.

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

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

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c) $(x^2)^3 = ?$

$(x^2)^3 = x^{2\times3} = x^6$

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

$= 9+3+6$

$= 18$