

1. A garrison of 400 men had a provision for 31 days. After 28 days 280 persons re-enforcement leave the garrison. Find the number of days for which the remaining ration will be sufficient?

Answers

1. 3 days
2. 8 days
3. **10 days**
4. 6 days

2. The number of arrangements that can be made with the letters of the word MEADOWS so that the vowels occupy the even places?

Answers

1. 720
2. **144**
3. 120
4. 36
5. 204

3. A boat is rowed downstream at 15.5km/hr and upstream at 8.5 km/hr. The speed of the stream is?

Answers

1. **3.5 km/hr**
2. 5.75 km/hr
3. 6.5 km/hr
4. 7 km/hr

4. A and B can complete a work in 15 days and 10 days respectively. They started doing the work together but after 2 days B had to leave and A alone completed the remaining work. The whole work was completed in:

Answers

1. 8 days
2. 10 days
3. **12 days**
4. 15 days

5. Find the principle on a certain sum of money at 5% per annum for  $2\frac{2}{5}$  years if the amount being Rs.1120?

Answers

1. **Rs. 1000**
2. Rs. 1100
3. Rs. 1050
4. Rs. 1200

6. A train 240 m long passed a pole in 24 sec. How long will it take to pass a platform 650 m long?

Answers

1. 65 sec
2. **89 sec**
3. 100 sec
4. 150 sec

7. A and B together can do a piece of work in 30 days. A having worked for 16 days, B finishes the remaining work alone in 44 days. In how many days shall B finish the whole work alone?

Answers

1. 30 days
2. 40 days
3. **60 days**
4. 70 days

8. What is the rate percent when the simple interest on Rs.800 amount to Rs.160 in 4 Years?

Answers

1. **5%**
2. 6%
3. 4 1/2%
4. 3 1/2%

9. Groups each containing 3 boys are to be formed out of 5 boys. A, B, C, D and E such that no group can contain both C and D together. What is the maximum number of such different groups?

Answers

1. 5
2. 6
3. **7**
4. 8

10. On 8th Dec, 2007 Saturday falls. What day of the week was it on 8th Dec, 2006?

Answers

1. Sunday
2. Thursday
3. Tuesday
4. **Friday**

11. The speed of a train is 90 kmph. What is the distance covered by it in 10 minutes?

## Answers

1. **15 kmph**
2. 12 kmph
3. 10kmph
4. 5 kmph

12. How much water must be added to a bucket which contains 40 liters of milk at the cost price of Rs.3.50 per liter so that the cost of milk reduces to Rs.2 per liter?

## Answers

1. 25 liters
2. 28 liters
3. **30 liters**
4. 35 liters

13. A vessel contains 20 liters of a mixture of milk and water in the ratio 3:2. 10 liters of the mixture are removed and replaced with an equal quantity of pure milk. If the process is repeated once more, find the ratio of milk and water in the final mixture obtained?

## Answers

1. **9:1**
2. 4:7
3. 7:1
4. 2:5

14. The marks obtained by Vijay and Amit are in the ratio 4:5 and those obtained by Amit and Abhishek in the ratio of 3:2. The marks obtained by Vijay and Abhishek are in the ratio of?

## Answers

1. 2:1
2. 5:3
3. **6:5**
4. 5:6

15. The greatest number which on dividing 1657 and 2037 leaves remainders 6 and 5 respectively, is:

## Answers

1. 123
2. **127**
3. 235
4. 305

16. The length of the bridge, which a train 130 meters long and travelling at 45 km/hr can cross in 30 seconds, is:

Answers

1. 200 m
2. 225 m
3. **245 m**
4. 250 m

17. A man can row upstream at 25 kmph and downstream at 35 kmph, and then find the speed of the man in still water?

Answers

1. 60 kmph
2. 10 kmph
3. **30 kmph**
4. 5 kmph

18. If a train, travelling at a speed of 90 kmph, crosses a pole in 5 sec, then the length of train is?

Answers

1. 104 m
2. **125 m**
3. 140 m
4. 152 m

19. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, then the value of x is:

Answers

1. 15
2. **16**
3. 18
4. 25

20. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is:

Answers

1. 276
2. 299
3. **322**
4. 345

Answers:

- 1) 400 for 31 days (provision)  
 provision for 400 men upto 31 days  
 till 28th days 400 men were there  
 After 28th is ~~2800000~~  
 no of people  $400 - 280 = 120$  person  
 available provision was for 400 ~~days~~ men  
 for next 3 days  
 Hence

$$\frac{400}{120} :: \frac{x}{3} \quad (\text{inverse prop})$$

$$x = \frac{400 \times 3}{120} \quad x = 10$$

- 2 MEADOWS  $\rightarrow$  vowels  $\rightarrow$  E A O  $\rightarrow$  (3)

— — — — —

4, 3, 3, 2, 2, 1, 1

$$4 \times 3 \times 3 \times 2 \times 2 = 144$$

3. Stream:  $\frac{1}{2} (S_d + S_u) = \frac{1}{2} (15.5 - 8.5) = \frac{7}{2} = 3.5$

4. LCM: 30

work of A in 1 day: 2

B in 1 day: 3

2 day work of A+B =  $5 \times 2 = 10$  remaining 20

20 = 10 days

(A+B) 2

total work 10 days of A & 2 days of A+B  
 = 12 days

5.1  $\frac{P}{100} \cdot \frac{R}{100} \cdot N = T$

$$P \times 5 \times \frac{12}{100} = 1120 - P$$

$$\frac{12P}{100} = 1120 - P$$

$$\left(\frac{12P}{100} + P\right) = 1120$$

$$P\left(\frac{1120}{100}\right) = 1120 \quad P = 1000$$

$$6) \quad s = \frac{d}{t} = \frac{240}{24} = 10 \text{ m/s}$$

$$t = \frac{d}{s} = \frac{(\text{train length} + \text{platform})}{10} = \frac{(890)}{10} = 89$$

7) A+B can finish work in 30 days  
per day work of A+B:  $\frac{1}{30}$

$$\therefore A+B = \frac{1}{30} \quad \text{---} \quad 4A+4B = \frac{4}{30} = \frac{2}{15}$$

A worked for 16  $\therefore 16A$  &  $13 = 44B$

$$16A + 44B = 1$$

$$4A + 11B = \frac{1}{4}$$

$$- \quad 4A + 4B = \frac{2}{15}$$

$$7B = \frac{1}{4} - \frac{2}{15} = \frac{7}{60}$$

$B = \frac{1}{60}$  B can do work alone in 60 days

$$8) \quad 800 \times R \times 4 = 160$$

$$R = \frac{160}{4 \times 800} = \frac{1}{20} = 5\%$$

9) 3 boy out of 5  
 ${}^5P_3 = \frac{5!}{3!2!} = \frac{5 \times 4 \times 3 \times 2 \times 1}{3 \times 2 \times 1 \times 2 \times 1} = 10 \text{ ways}$

but C & D can't be together  
cases: ACD BCD ECD  $\therefore 3$  case  
 $\therefore 10 - 3 = 7 \text{ ways}$

10) 1 day before: Friday

11)  $3 \times t = d$   
 $90 \times \frac{10}{60} = d \quad d = 15$



12. Cost of milk  
3.50

Cost of water  
1.0

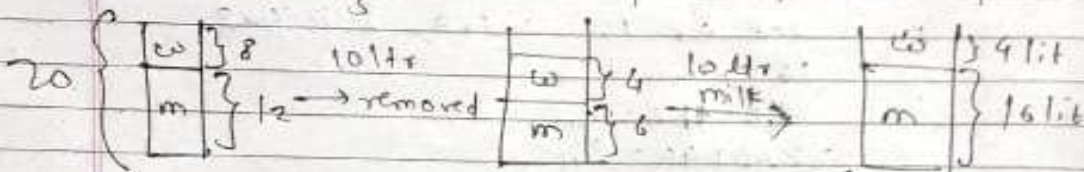
required cost  
2

$$\frac{2}{1.5} = \frac{20}{15} \times \frac{4}{3}$$

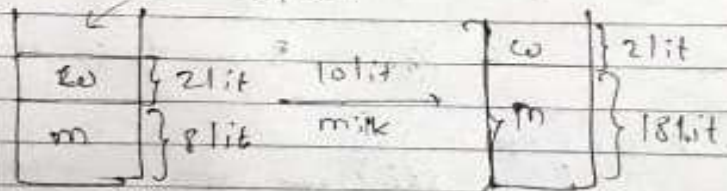
1.50  
40 → Pl milk 40  
30 then water 30

30

13: milk  $\frac{3}{5} \times 20 = 12$  lit. & water 8 lit



repeat



$$m:w = 18:2 = 9:1$$

14)  $\frac{V}{A_m} = \frac{4}{5}$      $\frac{A_m}{A_{b1}} = \frac{3}{2}$

$$\frac{V}{A_m} \times \frac{A_m}{A_{b1}} = \frac{4}{5} \times \frac{3}{2} = \frac{6}{5}$$

15) main numbers are

$$1657 - 6 = 1651$$

$$2037 - 5 = 2032$$

$$\begin{array}{r} 1651 \overline{) 2032} \\ \underline{1651} \phantom{00} 4 \\ 381 \phantom{00} 1651 \\ \underline{3810} \phantom{00} 127 \end{array}$$

$$\text{HCF of } 2032 \text{ \& } 1651 =$$

$$\begin{array}{r} 2 \phantom{00} \\ 127 \overline{) 1651} \\ \underline{381} \phantom{00} 127 \\ \underline{0} \phantom{00} \end{array} \therefore 127 \text{ is HCF}$$

$$16) 45 \text{ km/hr} = \frac{45 \times 5}{162} = \frac{25}{2}$$

$$\frac{(x+130)}{25\frac{1}{2}} = 30$$

$$x+130 = \frac{30 \times 57}{2} = 375$$

$$x = 375 - 130 = 245$$

$$17) g_{\text{mean}} = \frac{1}{2}(S_u + S_d) = \frac{1}{2}(28 + 35) = 30$$

$$18) \frac{305 \times 5}{187} = 28 \text{ m/s} \quad s = \frac{d}{t} \quad d = s \times t = 28 \times 5 = \underline{\underline{140}}$$

19) Cost price of each article be ₹1.

$$\therefore \text{CP of 20} = 20 \text{ Rs}$$

$$= \text{SP} = \text{Profit} \times \text{CP}$$

$$\text{SP} = \frac{125 \times 25}{100} = 20$$

$$\text{SP} = 25 \text{ Rs}$$

for 20 article selling price is 25

for ~~20~~ article SP is 20

$$\frac{20}{25} \times 20 = \frac{25}{20} \times 20$$

$$40 \times = \frac{400 \times 20}{255} = 16$$

$$20) \text{ HCF} = 23$$

Other ~~number~~ <sup>factor</sup> are 13 & 14

$$\therefore 13 \times 23 \text{ or } 14 \times 23 \text{ (larger)}$$

$$\underline{\underline{322}}$$