

## #1 **Explained** **Report** **Bookmark**

1100 boys and 700 girls are examined in a test; 42% of the boys and 30% of the girls pass. The percentage of the total who failed is?

- **A**  
58  $\frac{2}{3}$
- **B**  
62  $\frac{2}{3}$
- **C**  
65  $\frac{2}{3}$
- **D**  
63  $\frac{2}{3}$

Correct Answer :B

## Explanation

Total number of students =1100+700=1800.

Number of students passed=(42%of1100+30%of700)- (462 +210)=672.

Number of failues=1800-672=1128.

Percentage failure=(1128/1800\*100 )%=62\*  $\frac{2}{3}$ %.

## #2 **Explained** **Report** **Bookmark**

A bag contains 600 coins of 25 p denomination and 1200 coins of 50 p denomination. If 12% of 25 p coins and 24% of 50 p coins are removed, the percentage of money removed from the bag is nearly?

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- **A**  
21.6%

- **B**  
15.3%
- **C**  
14.6%
- **D**  
12.5%

**Correct Answer :A**

## Explanation

Total money = Rs.[600\*(25/100)+1200\*(50/100)]= Rs. 750.

25 paise coins removed = Rs. (600\*12/100) = 72. 50 paise coins removed = Rs. (1200\*24/100)= 288. Money removed =Rs.(72\*25/100+288\*50/100) = Rs.162.

Required percentage = (162/750\*100)% = 21.6 %.

**#3** **Explained** **Report** **Bookmark**

405 sweets were distributed equally among children in such a way that the number of sweets received by each child is 20% of the total number of children. How many sweets did each child received?

- **A**  
9
- **B**  
10
- **C**  
11
- **D**  
12

**Correct Answer :A**

## Explanation

Let the total number of children be  $x$ .

Then,  $x * (20\% \text{ of } x) = 405$

$$\Rightarrow x * 20x/100 = 405$$

$$X^2=405*5=2025$$

$$\Rightarrow x=45$$

Number of sweets received by each child =  $20\% \text{ of } 45 = 9$

**#4** [Explained](#) [Report](#) [Bookmark](#)

The population of a town is 3, 11, 250. The ratio between women and men is 43 : 40. If there are 24% literate among men and 8% literate among women, the total number of literate persons in the town is:

- **A**  
41800
- **B**  
48900
- **C**  
56800
- **D**  
99600

**Correct Answer :B**

## Explanation

$$= \frac{43}{83} \times \frac{8}{100} \times 311250 + \frac{40}{83} \times \frac{24}{100} \times 311250$$

$$= 48900$$

## #5 **Explained** **Report** **Bookmark**

In a competitive examination in State A, 6% candidates got selected from the total appeared candidates. State B had an equal number of candidates appeared and 7% candidates got selected with 80 more candidates got selected than A. What was the number of candidates appeared from each State ?

- **A**  
4000
- **B**  
8000
- **C**  
12000
- **D**  
16000

**Correct Answer :B**

### Explanation

Let the number of candidates appeared from each state be  $x$ .

In state A, 6% candidates got selected from the total appeared candidates

In state B, 7% candidates got selected from the total appeared candidates

But in State B, 80 more candidates got selected than State A

From these, it is clear that 1% of the total appeared candidates in State B = 80

=> total appeared candidates in State B =  $80 \times 100 = 8000$

=> total appeared candidates in State A = total appeared candidates in State B = 8000

## #6 [Explained](#) [Report](#) [Bookmark](#)

Ali the barber shaved 40 % of his customers and gave a haircut to 80 % of his customers. He charged Rs. 7 for a shave and Rs. 5 for a haircut. If 20 % of customers who opted for a shave also had a hair-cut, what were Khan's earnings if he had 75 customers (in Rs.)?

- **A**  
410
- **B**  
1020
- **C**  
510
- **D**  
1. Cannot be determined
- 

**Correct Answer :C**

## Explanation

Total customers = 75

Numbers of customers shaved =  $75 * 40/100 = 30$

Number of customers who got hair cut =  $75 * 80/100 = 60$

$\therefore$  His total income =  $(30 * 7) + (60 * 5) = 210 + 300 = 510$ .

## #7 [Explained](#) [Report](#) [Bookmark](#)

In a class of 80 students and 5 teachers, each student got sweets that are 15% of the total number of students and each teacher got sweets that are 25% of the total number of students. How many sweets were there?

- **A**  
1060
- **B**  
960
- **C**  
1020
- **D**  
920

**Correct Answer :A**

## Explanation

Total number of sweets

$$= 80 \times 15 \times 80/100 + 5 \times 80 \times 25/100$$

$$= 960 + 100 = 1060$$

**#8** **Explained** **Report** **Bookmark**

Rohan spends 24% of an amount of money on an insurance policy, 34% on food, 19% on children's education and 17% on recreation. He deposits the remaining amount of Rs. 540 in bank. How much total amount does he spend on food and insurance policy together?

- **A**  
.Rs. 6350
- **B**  
Rs. 5220
- **C**  
Rs. 5890
- **D**  
Rs. 6458

**Correct Answer :B**

## Explanation

Remaining % of amount with Rohan

$$= 100 - (24 + 34 + 17 + 19)$$

$$= 100 - 94$$

$$= 6\%$$

$$\Rightarrow 6\% = 540$$

$$\Rightarrow 100\% = ?$$

$$540 \times 100/6 = \text{Rs. } 9000$$

Now, Money spent on insurance and food is

$$= 34 + 24 = 58\% \text{ of } 9000$$

$$= 58 \times 9000/100$$

$$= 58 \times 90 = \text{Rs. } 5220$$

#9 **Explained** **Report** **Bookmark**

In an election, candidate A got 75% of the total valid votes. If 15% of the total votes were declared invalid and the total numbers of votes is 560000, find the number of valid vote polled in favor of candidate?

- **A**  
84000
- **B**  
83000

- **C**  
84000
- **D**  
None of these

**Correct Answer :D**

## Explanation

Total number of invalid votes = 15 % of 560000

$$= 15/100 \times 560000$$

$$= 8400000/100$$

$$= 84000$$

Total number of valid votes  $560000 - 84000 = 476000$  Percentage of votes polled in favour of candidate A = 75%

Therefore, the number of valid votes polled in favour of candidate A

$$= 75 \% \text{ of } 476000 = 75/100 \times 476000$$

$$= 35700000/100$$

$$= 357000$$

**#10** **Explained** **Report** **Bookmark**

**A shopkeeper bought 600 oranges and 400 bananas. He found 15% of oranges and 8% of bananas were rotten. Find the percentage of fruits in good condition?**



- **A**  
66
- **B**  
77
- **C**  
88
- **D**  
99

**Correct Answer :C**

## Explanation

Total number of fruits shopkeeper bought =  $600 + 400 = 1000$

Number of rotten oranges = 15% of 600

$$= 15/100 \times 600$$

$$= 9000/100 = 90$$

Number of rotten bananas = 8% of 400

$$= 8/100 \times 400$$

$$= 3200/100 = 32$$

Therefore, total number of rotten fruits =  $90 + 32 = 122$  Therefore Number of fruits in good condition =  $1000 - 122 = 878$

Therefore Percentage of fruits in good condition =  $(878/1000 \times 100)\%$

$$= (87800/1000)\%$$

$$= 87.8\% \Rightarrow 88(\text{APPROX})$$

## #11 **Explained** **Report** **Bookmark**

A candidate who gets 20% marks fails by 10 marks but another candidate who gets 42% marks gets 12% more than the passing marks. Find the maximum marks.

- **A**  
50
- **B**  
100
- **C**  
150
- **D**  
200

**Correct Answer :B**

### Explanation

A candidate who gets 20% marks fails by 10 marks.

Another candidate who gets 42% marks gets 12% more than the passing marks.

Let the maximum marks be  $x$

$$\Rightarrow 20\% \text{ of } x + 10 = 42\% \text{ of } x - 12\% \text{ of } x$$

$$\Rightarrow 0.20 \times x + 10 = 0.42 \times x - 0.12 \text{ of } x$$

$$\Rightarrow 0.20x + 10 = 0.42x - 0.12x$$

$$\Rightarrow 0.20x + 10 = 0.30x$$

$$\Rightarrow 0.30x - 0.20x = 10$$

$$\Rightarrow 0.10x = 10$$

$$\Rightarrow x = 10/0.10 = 100$$

Hence,

The Maximum marks = 100

## #12 [Explained](#) [Report](#) [Bookmark](#)

The percentage of metals in a mine of zinc ore is 60%. Now the percentage of silver is  $\frac{3}{4}\%$  of metals and the rest is zinc. If the mass of ore extracted from the mine is 8000 kg, the mass (in kg) of zinc is?

- **A**  
5147 kg
- **B**  
4764 kg
- **C**  
3587 kg

- **D**  
2125 kg

**Correct Answer :B**

## Explanation

Mass of zinc ore = 8000 kg

Mass of metal = 60% of 8000 = 4800 kg

Mass of silver in metal =  $\frac{3}{4} \times \frac{4800}{100} = 36$  kg  
Mass of zinc =  $4800 - 36 = 4764$  kg.

**#13** [Explained](#) [Report](#) [Bookmark](#)

A jar can 20 litre milk. From the jar, 4 litres milk was taken out and replaced with an equal quantity of water. If 4 litres of the newly formed mixture is taken out of the can, then what is the final quantity of milk left in the can?

- **A**  
14.5 lit
- **B**  
12.8 lit
- **C**  
11.6 lit
- **D**  
10.46 lit

**Correct Answer :B**

## Explanation

This can be solved as

$$20 \left(1 - \frac{4}{20}\right)^2 = 20 \left(1 - \frac{1}{5}\right)^2 = 20\left(\frac{4}{5}\right)^2 = 20 \left(\frac{16}{25}\right) =$$

$$64/5 = 12.8$$

## #14 Explained Report Bookmark

The cost of packaging of the fruits is 30% the cost of fresh fruits. The cost of fruits increased by 20% but the cost of packaging decreased by 25%, then the percentage change of the cost of packed oranges, if the cost of packed fruits is equal to the sum of the cost of fresh fruits and cost of packaging?

- **A**  
4%
- **B**  
6.5%
- **C**  
5.2%
- **D**  
no ne of these

**Correct Answer :D**

## Explanation

Let initial Cost of fresh, fruits = 100.

Packaging cost = 30. Initial total cost = 100 + 30 = 130 After increasing in cost of fresh fruit 20%,

Cost of fresh fruits = 120

And cost of packing decreases by 25 % so, Cost of packing =  $\frac{3}{4} \times 30 = 22.5$

Total cost = 120 + 22.5 = 142.5 Increased cost = 142.5 - 130 = 12.5

$$\% \text{ increased} = (12.5 * 100) / 130 = 9.61\%$$

### #15 [Explained](#) [Report](#) [Bookmark](#)

In a college there are 60% female students. 50 % of all the male students are in computer department. If there are total 62% students in computer department out of total 2400 students, then the no. of female students who are in computer department?

- **A**  
528
- **B**  
1488
- **C**  
1008
- **D**  
730

**Correct Answer :C**

## Explanation

Let 60% students are female and 40% are male.

Then, (50% male) 20% of male are in computer department

and (62-20)42% are female in computer department.

Female in computer department =  $(2400 * 42) / 100$

= 1008.

### #16 [Explained](#) [Report](#) [Bookmark](#)

In an election only two candidates M and N contested 30% of the voters did not vote and 1600 votes were declared as invalid. The winner, M got 4800 votes more than his opponent thus he secured 51% votes of the total voters on the voter list. Percentage votes of the loser candidate, N out of the total voters on the voter list is?

null

- **A**  
5%
- **B**  
4%
- **C**  
2%
- **D**  
3%

Correct Answer :D

## Explanation

Total voters on the voter list = x

$$51/100x + 51/100x - 4800 = 70/100x - 1600$$

$$102x/100 - 4800 = 70/100x - 1600$$

$$32x/100 = 3200 \quad x = 10000$$

Votes of the loser candidate =  $5100 - 4800 = 300$  Percentage votes of the loser candidate =  $300/10000 * 100 = 3\%$

**#17** [Explained](#) [Report](#) [Bookmark](#)

In a factory there are three types of bulbs L1, L2 and L3 which produces 20%, 15% and 32% of the total products respectively. L1, L2 and L3 produces 3%, 7% and 2% defective products, respectively. Find the percentage of non-defective products ?

null

- **A**  
46.71%
- **B**  
30.71%
- **C**  
53.71%
- **D**  
64.71%

Correct Answer :D

## Explanation

$$(20 \times 0.97) + (15 \times 0.93) + (32 \times 0.98) = 19.4 + 13.95 + 31.36$$

$$= 64.71$$

#18 **Explained** **Report** **Bookmark**

In an election 10% of the voters on the voters' list did not cast votes and 60 voters cast their ballot papers blank. There were only two candidates. The winner was supported by 47% of all voters in the list and he got 308 votes more than his rival. The number of voters on the list was?

null

- **A**  
3600
- **B**  
6200
- **C**  
4575
- **D**  
6028



Correct Answer :B

## Explanation

Let total number of voters =  $x$

People who voted for the winner are =  $0.47x$  People who voted for the loser are =  $0.47x - 308$  People who cast blanks are =  $60$

and people who did not vote are =  $0.1x$  solve the following equation  $0.47x + 0.47x - 308 + 60 + 0.1x = x \Rightarrow x = 6200$

#19 [Explained](#) [Report](#) [Bookmark](#)

Deepak was to get a 50% hike in his pay but the computer operator wrongly typed the figure as 80% and printed the new pay slip. He received this revised salary for three months before the organization realized the mistake. What percentage of his correct new salary will get in the fourth month, if the excess paid to him in the previous three months is to be deducted from his fourth month?

null

- **A**  
30%
- **B**  
40%
- **C**  
45%
- **D**  
25%

Correct Answer :B

## Explanation

Assume Deepak's salary = 10000

original hike(50%) amount = 5000 ; Revised salary

=15000

Wrongly typed(80%) hike amount = 8000

Diff = 3000;

For three months = 9000

Fourth Month Salary =  $15000 - 9000 = 6000$   $15000 * x / 100 = 6000 \Rightarrow x = 40\%$

**#20** [Explained](#) [Report](#) [Bookmark](#)

Sohan spends 23% of an amount of money on an insurance policy, 33% on food, 19% on children's education and 16% on recreation. He deposits the remaining amount of Rs. 504 in the bank. How much total amount did he spend on food and insurance policy together?

null

- **A**  
3146
- **B**  
3126
- **C**  
3136
- **D**  
3048

**Correct Answer :C**

## Explanation

Savings(%)

$$[100 - (23 + 33 + 19 + 16)]\% = 9\%$$

$$9\% \text{ of } x = 504$$

$$\Rightarrow x = 504 * 100/9 = 5600$$

Amount spend on food and insurance policy together = 56% of 5600 = Rs.3136

## #21 **Explained** **Report** **Bookmark**

A shopkeeper bought 30 kg of wheat at rate of Rs.45 per kg. He sold 40% of the total quantity at the rate of Rs.50 per kg. Approximately, at what price per kg should he sell the remaining quantity to make 25% overall profit?

null

- **A**  
54
- **B**  
52
- **C**  
50
- **D**  
60

**Correct Answer :D**

## Explanation

Total cost price of wheat =  $30 * 45 = 1350$  40% of 30kg = 12kg.

Remaining quantity =  $30 - 12 = 18$

12kg wheat sold at Rs. 50 per kg. =  $12 * 50 = 600$  profit of wheat =  $(1350 * 25)/100 = 337.5$

s.p of wheat =  $1350 + 337.5 = 1687.5$

Remaining s.p =  $1687.5 - 600 = 1087.5$

Price of wheat =  $1087.5/18 = \text{Rs. } 60.4$

## #22 **Explained** **Report** **Bookmark**

A shopkeeper marked an article at some percentage more than the cost price of the article. The shopkeeper sold the article at 12% profit and allows a discount of 20%. Find the percentage by which the article was marked above the cost price?

null

- **A**  
30%
- **B**  
50%
- **C**  
60%
- **D**  
40%

**Correct Answer :D**

## Explanation

Let the marked price of the article be Rs.y. Article was marked by x% above the cost price.

SP of the article = 80% of y = Rs.  $4y/5$

112% of the CP =  $4y/5$

CP of the article =  $(4y \cdot 100)/(5 \cdot 112) = \text{Rs. } 5y/7$  (100+x)% of  $5y/7 = y$

$\Rightarrow (100+x)\% = 7/5$

$\Rightarrow x = 40\%$

**#23** **Explained** **Report** **Bookmark**

Rajni purchased a mobile phone and a refrigerator for Rs. 12000 and Rs. 10000 respectively. She sold the refrigerator at a loss of 12 percent and mobile phone at a profit of 8 percent. What is her overall loss/profit ?

- **A**  
loss of Rs. 280
- **B**  
loss of Rs. 240
- **C**  
profit of Rs. 240
- **D**  
profit of Rs. 260

**Correct Answer :B**

## Explanation

Total cost price =  $12000 + 10000 = \text{Rs. } 22000$

Loss on refrigerator =  $(10000 \cdot 12)/100 = \text{Rs. } 1200$

s.p of refrigerator =  $10000 - 1200 = \text{Rs. } 8800$

Profit on mobile phone =  $(12000 \cdot 8)/100 = \text{Rs. } 960$

s.p of mobile phone =  $12000 + 960 = \text{Rs. } 12960$  Total s.p =  $12960 + 8800 = \text{Rs. } 21760$

Loss =  $22000 - 21760 = \text{Rs. } 240$

## #24 Explained Report Bookmark

Aman marked his bike 40% above cost price and sold it to Arun after two consecutive discounts of 10% and 20%. In this transaction Aman made a profit of Rs.416. Find the profit earned by Arun if he sold the bike to Alok at a profit of 12%?

null

- **A**  
6901.98
- **B**  
6289.92
- **C**  
7250.23
- **D**  
6670.74

Correct Answer :B

## Explanation

Let the CP of the bike be Rs.x. MP of the bike =  $1.40 \times x = \text{Rs. } 1.4x$

SP of the bike =  $0.90 \times 0.80 \times 1.4x = \text{Rs. } 1.008x$  Profit =  $1.008x - x = 416$

$\Rightarrow x = 52000$

CP of the bike for Aman = Rs.52000

SP of bike for Aman = CP of bike for Arun =  $52000 + 416$

= Rs.52416

Profit earned by Arun =  $52416 \times 0.12$  = Rs.6289.92

## #25 **Explained** **Report** **Bookmark**

Rahim went shopping to buy a Mobile, the shopkeeper asked him to pay 18% Tax if he wants a bill. If not you can get 7% discount on the actual price of the mobile. Then Rahim decided not to take the bill and paid Rs. 4650. By this how much money could Rahim saved on purchasing mobile?

null

- **A**  
250
- **B**  
350
- **C**  
650
- **D**  
1250

**Correct Answer :D**

## Explanation

$$SP \times 93/100 = 4650$$

$$SP = 5000$$

$$\text{Including tax} = 5000 + 900 = 5900$$

$$\text{Saving} = 5900 - 4650 = 1250$$

## #26 Explained Report Bookmark

A sells an item at 20% profit to B. B sells it to C at 10% profit. C sells it to D at Rs.16 profit. Difference between the cost price of D and the cost price of A was Rs.500. How much did B pay to A for the item?

null

- **A**  
1250
- **B**  
1550
- **C**  
1815
- **D**  
1800

**Correct Answer :C**

### Explanation

Let A's purchase it at Rs x.

A sells to B at a price of :  $x + (x * 20)/100 = 6x/5$

B sells to C at a price of :  $6x/5 * (6x/5 * 10/100) = 6x/5 + 3x/25 = 33x/25$

C sells to D at a price of :  $33x/25 + 16$

Now, difference between D and A

$$\Rightarrow (33x/25 + 16) - x = 500$$

$$\Rightarrow 33x + 400 - 25x = 500 * 25$$



$$\Rightarrow 8x = 12500 - 400$$

$$\Rightarrow x = 1512.5$$

Amount paid by B to A :  $6x/5 = (6 * 1512.5)/5 = \text{Rs.}1815$

## #27 [Explained](#) [Report](#) [Bookmark](#)

Naman bought a bike for Rs.18000. He spent 20% of the amount that he had paid for buying it for its repair. He then sold the bike to Charu and earned a profit of 25%. Find the amount paid by Charu to Naman?

null

- **A**  
44000
- **B**  
38000
- **C**  
33000
- **D**  
27000

Correct Answer :D

## Explanation

Total cost of the bike =  $18000 * 1.20 = \text{Rs.}21600$  Amount paid by Charu =  $21600 * 1.25 = \text{Rs.}27000$

## #28 [Explained](#) [Report](#) [Bookmark](#)

A manufacture undertakes to supply 2000 pieces of a particular component at Rs.25 per piece. According to his estimates, even if 5% fail to pass the quality tests, then he will make a profit of 25%. However as it turned out, 50% of the components were rejected. What is the loss to the manufacture?

- **A**  
12,000
- **B**  
13,000
- **C**  
14,000
- **D**  
15,000

**Correct Answer :B**

## Explanation

Total number of component =2000

If a component found to be defective

Then, the number of non-defective component = $2000 - 5\% \text{ of } 2000 = 2000 - 100$   
 $5 \times 2000 = 1900$

So, selling price of 190 component = $1900 \times 25 = \text{Rs. } 47500$

This content 25% profit of the manufacturer.

Let the total manufacturing price of the component =x

SP=47500

$$\Rightarrow x + 25\% \text{ of } x = 47500$$

$$\Rightarrow (100x + 25x)/100 = 47500$$

$$\Rightarrow 125x = 4750000$$

$$\Rightarrow x = \text{Rs. } 38000$$

if 50% rejected, only 1000 pieces sold so. then

$$\text{Total collection} = 25 \times 1000 = 25000 (\text{SP})$$

$$\text{Loss} = \text{cp} - \text{sp} = 38000 - 25000 = \text{Rs. } 13000$$

## #29 Explained Report Bookmark

Profit earned by an organization is distributed among officers and clerks in the ratio of 5:3 respectively. If the number of officers is 45 and the number of clerks is 80 and the amount received by each officer is Rs.25000, what was the total amount of profit earned?

null

- **A**  
22 lakhs

- **B**  
18.25 lakhs
- **C**  
18 lakhs
- **D**  
23.25 lakhs

**Correct Answer :D**

## Explanation

Profit for officer = 25000

Profit for clerk =  $\frac{3}{5} * 25000 = 15000$

Total profit for officers =  $45 * 25000 = 1125000$

Total profit for clerks =  $80 * 15000 = 1200000$

Total amount =  $1125000 + 1200000 = 2325000 = 23.25 \text{ lakhs}$

**#30** **Explained** **Report** **Bookmark**

**Gopal bought a laptop for Rs.48900. He marked the price of the laptop 60% above the cost price and sold to Radha at 35% discount. If Radha sold the same laptop to Komal at 25% profit. Find the discount offered by Radha provided the marked price of the laptop was same as Gopal had marked?**

null

- **A**  
18.75%
- **B**  
13.34%
- **C**  
19.12%

- **D**  
14.35%

**Correct Answer :A**

## Explanation

MP of the laptop = 160% of 48900 = Rs.78240

The price at which Gopal sold the laptop to Radha = 65% of 78240 = Rs.50856

The price at which Radha sold the laptop to Komal = 125% of 50856 = Rs.63570

Discount = 78240 – 63570 = Rs.14670

Discount% =  $14670/78240 \times 100 = 18.75\%$

### #31 **Explained** **Report** **Bookmark**

Puja marks an article at 30% above its cost price and sells it to Priya at 12% discount. Priya marks it up by 50% and sells it to Gita at a discount of 25%. If selling price by Priya is Rs.1001 more than the selling price by Puja, find the price at which Sita buys the article?

null

- **A**  
8100
- **B**  
9700
- **C**  
9200
- **D**  
9009

Correct Answer :D

## Explanation

Let the price of the article but by Puja be Rs.x MP for Puja =  $x + 30\%$  of  $x$  = Rs.1.3x

SP for Puja =  $1.3x \times 0.88$  = Rs.1.144x MP for Priya =  $1.144x \times 1.5$  = Rs.1.716x SP for Priya =  $1.716x \times 0.75$  = 1.287x

Now,  $1.287x - 1.144x = 1001 \Rightarrow x = \text{Rs.}7000$

CP for Sita = SP for Priya =  $1.287x = 1.287 \times 7000 = \text{Rs.}9009$

#32 **Explained** **Report** **Bookmark**

Aryan sold a repair mobile to Bhaskar at a profit of 30% and Bhaskar sold it to Chandu at a profit of 20%. Chandu sold it to Dinesh at a loss of 23.07%. Dinesh repaired the mobile by spending 5% of his purchasing price and then sold it again to Aryan at a profit of 3.17%. Then what is the loss of Aryan?

null

- **A**  
5%
- **B**  
10%
- **C**  
15%
- **D**  
No Loss No Profit

Correct Answer :D

## Explanation

Aryan

Let CP = 100 SP = 130

Bhaskar = 156

Chandu = 120

Dinesh =  $126 + 3.17\% = 130$

Aryan =  $130 - 130 = 0$

**#33** [Explained](#) [Report](#) [Bookmark](#)

**Jim sells a book to Carrey at a profit of 20% and Carrey sells this book to Sid at a profit of 25%. Now Sid sells this book at a loss of 10% to Simba. At what percentage loss should Simba sell this book now so that his SP becomes equal to Jim's CP?**

null

- **A**  
26.68%
- **B**  
25.92%
- **C**  
58.66%
- **D**  
Cannot be determined

**Correct Answer :B**

## Explanation

100(jim) --> 120(carrey)-->150(sid) Simba ( 1325)

$$\text{Required \%} = 135 - 100 / 135 * 100$$

$$\Rightarrow 35 / 135 * 100$$

$$\Rightarrow 25.92\%$$

### #34 [Explained](#) [Report](#) [Bookmark](#)

Swati went shopping to buy a watch with some money. She selected a watch, which is marked Rs.400 higher price than the money she had. But shopkeeper gave two successive discounts of 10% and 15% respectively on the marked price of the watch. Then she could buy that watch and also another watch worth Rs.540 with all the money she had. Then what is the marked price on the first watch?

null

- **A**  
3060
- **B**  
3600
- **C**  
4000
- **D**  
4200

**Correct Answer :C**

## Explanation

$$1. (x+400) * 90/100 * 85/100 + 540 = x \quad x = 3600$$

$$\text{MP} = 3600 + 400 = 4000$$

### #35 [Explained](#) [Report](#) [Bookmark](#)



Some mangoes are purchased at the rate of 8 mangoes/Rs and some more mangoes at the rate of 6 mangoes/Rs, investment being equal in both the cases. Now, the whole quantity is sold at the rate of 3.5 mangoes/Rs. What is the net percentage profit/loss?

null

- **A**  
100% profit
- **B**  
60% loss
- **C**  
60% loss
- **D**  
No profit/no loss

Correct Answer :A

## Explanation

Let 1rs invested in both cases

: in 2rs no of mangoes purchases =  $8 + 6 = 14$

SP of 14 mangoes =  $14 \times \frac{1}{3.5} = 4\text{rs}$

100% Profit

**#36** **Explained** **Report** **Bookmark**

A shopkeeper marked an article at  $x\%$  above the cost price and sold it after two consecutive discounts of 10% and 20%. In this transaction he had a profit of Rs.360. Find the value of  $x$  if the marked price of the article is Rs.6750?

null

- **A**  
40%
- **B**  
30%
- **C**  
45%
- **D**  
50%

**Correct Answer :D**

## Explanation

SP of the article =  $6750 \times 0.80 \times 0.90 = \text{Rs.}4860$  CP =  $4860 - 360 = \text{Rs.}4500$

MP =  $4500 \times (100+x)/100 = 6750$

Therefore,  $4500 + 45x = 6750$

$\Rightarrow x = 50\%$

**#37** **Explained** **Report** **Bookmark**

A man would gain 25% by selling a chair for Rs.47.5 and would gain 15% by selling a table for Rs.57.5. He sells the chair for Rs. 45; what is the least price for which he must sell the table to avoid any loss on the two together?

null

- **A**  
41.2
- **B**  
48.5
- **C**  
42.5

- **D**  
43

Correct Answer :D

## Explanation

Cp of chair =  $100/125 * 47.5 = 38\text{rs}$

CP of table =  $100/115 * 57.5 = 50\text{Rs}$

Required SP of table =  $(50 + 30) - 45 = 43$

#38 **Explained** **Report** **Bookmark**

Mousumi is a shopaholic. She went to a bag shop to buy a handmade wallet. She took ₹ 15 to the shop in the form of one rupee notes and 20 paise coins. After returning from the shop after buying the wallet, she was left with as many one rupee notes as she originally had 20 paise coins and as many 20 paise coins as she had originally one rupee notes. The total amount also reduced by two-third. What was the cost of the wallet?

null

- **A**  
9.60
- **B**  
11.50
- **C**  
7
- **D**  
5.75

Correct Answer :A

## Explanation

Let number of one rupee notes= $X$  Number of 20 paise coins= $Y$

Mousumi started with  $(100X+20Y)$  and came back with  $(100Y$  and  $20A)$  paise

Also,  $100Y+20X=(1/3) (100X+20Y)$

$\Rightarrow X=7Y$

By hit and trial method,

Put  $Y=1 \Rightarrow X=7 \Rightarrow$  total ₹ 7.2 is less Put  $Y=2 \Rightarrow X=14 \Rightarrow$  Total=₹ 14.4

This is correct.

Hence she spent= $(2/3) \times 14.4 = ₹ 9.60 =$  cost of wallet

### #39 [Explained](#) [Report](#) [Bookmark](#)

Akash bought a Sopha for Rs. 50,000. After one year he sold it to Bhuvan at 10% less of his cost price. Bhuvan spends extra Rs.600 for its repair. And offered Sopha to Charan for Rs.X. Charan requested to get a discount of 15% on that price. But Bhuvan gave him two successive discounts of 10% and 5% instead of 15%. By this Bhuvan got Rs.300 more from Charan. What is the profit % of Bhuvan?

null

- **A**  
0%
- **B**  
12.5%
- **C**  
15%
- **D**  
20%

**Correct Answer :B**

## Explanation

$$x \times (90/100 \times 95/100 - 85/100) = 300$$

$$x = 60,000$$

Now Charan purchased for  $60,000 \times 90/100 \times 95/100 =$

$$51300$$

$$\text{Bhuvan CP} = 45000 + 600 = 45600$$

$$51300 = 45600 \times (100 + p/100)$$

$$p = 12.5\%$$

**#40** [Explained](#) [Report](#) [Bookmark](#)

The ratio of number of books and number of pens sold by a shopkeeper is 5:3 resp. If the price of 6 pens is Rs.270 and the price of a book is 60% more than the price of a pen. If the total revenue earned by the shopkeeper is Rs.2475 find the number of books sold by shopkeeper?

null

- **A**  
23
- **B**  
25
- **C**  
28
- **D**  
22

**Correct Answer :B**

## Explanation

Price of each pen =  $270/6 = \text{Rs.}45$  Price of each book =  $45 \times 1.6$

= Rs.72 Now,  $3x \times 45 + 5x \times 72 = 2475$

$\Rightarrow x = 5$

Number of books sold by the shopkeeper =  $5 \times 5 = 25$

### #41 **Explained** **Report** **Bookmark**

Radha's present age is three years less than twice her age 12 years ago. Also, the respective ratio between Raj's present age and Radha's present age is 4 : 9. What will be Raj's age after 5 years ?

null

- **A**  
12 yr
- **B**  
17 yr
- **C**  
21 yr
- **D**  
Cannot be determined

**Correct Answer :B**

## Explanation

Let the present age of Radha = x yr

$$\Rightarrow x = 2(x - 12) - 3$$

$$\Rightarrow x = 2x - 24 - 3$$

$$\Rightarrow x = 27$$

Present age of Raj =  $\frac{4}{9} \times 27 = 12$  yr. Raj's age after 5 years  $12+5=17$  yr.

**#42** [Explained](#) [Report](#) [Bookmark](#)

If Ajay is as much elder than Vijay as he is younger to Kunal and sum of ages of Vijay and Kunal is 36 yr. Find the age of Ajay?

null

- **A**  
18 yr
- **B**  
24 Yr
- **C**  
20 Yr
- **D**  
16 Yr

**Correct Answer :A**

## Explanation

Let the present age of Ajay is "x" yr and Ajay is younger to Kunal by "y" yr.

Kunal's age =  $x + y$

Vijay's age =  $x - y$

$$\Rightarrow (x + y) + (x - y) = 36$$

$$\Rightarrow 2x = 36$$

$$\Rightarrow x = 18 \text{ yr.}$$

### #43 Explained Report Bookmark

Radha's age is  $133\frac{1}{3}\%$  of what it was 8 years ago, but 80% of what it will be after 8 years. What is her present age?

null

- **A**  
12
- **B**  
32
- **C**  
42
- **D**  
30

**Correct Answer :B**

## Explanation

Let Radha's present age be Y years.

Then  $133\frac{1}{3}\%$  of  $(Y - 8) = Y$  and  $80\%(Y+8) = Y$  So,  $133\frac{1}{3}\%$  of  $(Y-8) = 80\%(Y+8)$

$$4(Y-8)/3 = 4(Y+8)/5$$

$$5(Y-8) = 3(Y+8)$$

$$2Y = 64 = 32$$



#### #44 [Explained](#) [Report](#) [Bookmark](#)

If 6 years are subtracted from the present age of Sunny and the remainder is divided by 18, then the present age of his grandson Ronny is obtained. If Ronny is 2 years younger to Robin whose age is 5 years, then what is the age of Sunny?

null

- **A**  
48
- **B**  
80
- **C**  
62
- **D**  
60

Correct Answer :D

### Explanation

Let Sunny's age be  $x$ .

Ronny is 2 years younger than Robin,

so Ronny is 3 years (i.e.  $5 - 2 = 3$ )

If Sunny had born 6 years before, his age would had been  $x - 6$ .

As per the question,  $x - 6$  should be 18 times as that of Ronny's age.

i.e.  $x - 6 = 3 \times 18$   $x = 60$

#### #45 [Explained](#) [Report](#) [Bookmark](#)

Five years ago,  $\frac{3}{2}$  of Vishnu and  $\frac{7}{5}$  of Balaji is 6:7. 7 years hence, their ratio will be 5:6. Then what will be 25% sum of present ages of both?

null

- **A**  
5 years
- **B**  
27 years
- **C**  
29.5 years
- **D**  
27.5 years

**Correct Answer :C**

## Explanation

$$(\frac{3}{2}x+12)/(\frac{7}{5}x+12) = \frac{5}{6} \quad X = 12$$

7 years hence ages= 60:72 Present ages=53:65

25% of sum of present age =  $\frac{1}{4} \times 118 = 29.5$

**#46** **Explained** **Report** **Bookmark**

Farah was married 8 yr ago, Today her age is  $\frac{9}{7}$  time to that at the time of marriage. At present, her daughter's age is  $\frac{1}{6}$ th of her age. What was her daughter's age 3 yr ago?

null

- **A**  
6 yr
- **B**  
7 yr

- **C**  
3 yr
- **D**  
Cannot be determined

**Correct Answer :C**

## Explanation

Let Farah's age 8 yr ago =  $x$  yr Farah's present age =  $(x + 8)$  yr

$$\Rightarrow x + 8 = 9x/7$$

$$\Rightarrow 7x + 56 = 9x$$

$$\Rightarrow 2x = 56$$

$$\Rightarrow x = 28$$

Farah's present age =  $28 + 8 = 36$  yr Her daughter's age =  $1/6 * 36 = 6$  yr

Her daughter's age 3 yr ago =  $6 - 3 = 3$  yr.

**#47** [Explained](#) [Report](#) [Bookmark](#)

The respective ratio between the present age of Ram, Rohan and Raj is 3:4:5. If the average of their present age is 28 yr, then what would be the sum of the ages of Ram and Rohan together after 5 yr?

null

- **A**  
45 yr
- **B**  
55 yr

- **C**  
59 yr
- **D**  
46 yr

**Correct Answer :C**

## Explanation

Let the ages of Ram, Rohan and Raj is  $3x$ ,  $4x$ ,  $5x$  respectively.

$$\Rightarrow (3x + 4x + 5x)/3 = 28$$

$$\Rightarrow 12x = 84$$

$$\Rightarrow x = 7 \text{ yr}$$

Present age of Ram =  $3 * 7 = 21$  yr Present age of Rohan =  $4 * 7 = 28$  yr

Total age of Ram and Rohan =  $21 + 28 = 49$  yr

After 5 year age of Ram and Rohan =  $49 + 5 + 5 = 59$  yr

**#48** **Explained** **Report** **Bookmark**

The ratio of present age of Manoj to that to Wasim is 3:11. Wasim is 12 yr younger than Rehana. Rehana's age after 7 yr. will be 85 yr. What is the present age of Manoj's father, who is 25 yr older than Manoj?

null

- **A**  
43 yr
- **B**  
67 yr

- **C**  
45 yr
- **D**  
69yr

**Correct Answer :A**

## Explanation

Rehan's age = 78 yr.

Wasim's age =  $78 - 12 = 66$  yr.

Let present age of Manoj =  $3x$  and present age of Wasim

=  $11x$

=>  $11x = 66$

=>  $x = 6$  yr.

Manoj's age =  $3 * 6 = 18$  yr

Manoj's father age =  $18 + 25 = 43$  yr.

**#49** **Explained** **Report** **Bookmark**

The average age of husband, wife and their child 3 years ago was 27 years and that of wife and the child 5 years ago was 20 years. The present age of the husband is:

null

- **A**  
30 years

- **B**  
35 years
- **C**  
40 years
- **D**  
45 years

**Correct Answer :C**

## Explanation

Sum of the present ages of husband, wife and child =  $(27 \times 3 + 3 \times 3)$  years = 90 years.

Sum of the present ages of wife and child =  $(20 \times 2 + 5 \times$

2) years = 50 years.

Husband's present age =  $(90 - 50)$  years = 40 years

**#50** **Explained** **Report** **Bookmark**

The captain of a cricket team of 11 members is 26 years old and the wicket keeper is 3 years older. If the ages of these two are excluded, the average age of the remaining players is one year less than the average age of the whole team. What is the average age of the team?

null

- **A**  
23 years
- **B**  
24 years
- **C**  
25 years
- **D**  
22 years

Correct Answer :A

## Explanation

Let the average age of the whole team by x years.  $11x - (26 + 29) = 9(x - 1)$

$$\Rightarrow 11x - 9x = 46$$

$$\Rightarrow 2x = 46$$

$$\Rightarrow x = 23.$$

So, average age of the team is 23 years.

#51 [Explained](#) [Report](#) [Bookmark](#)

In a hockey team of 11 members, the captain's age is 26 years old and the goalkeeper is 3 years older. If the ages of these two are excluded, the average age of the remaining players is one year less than the average age of the whole team. What is the average age of the team?

null

- **A**  
23 year
- **B**  
24 year
- **C**  
25 year
- **D**  
26 year

Correct Answer :A

## Explanation

Let the average age of the whole team be  $x$  years. Then, according to the question,

$$11x - (26 + 29) = 9(x - 1)$$

$$\Rightarrow 11x - 9x = 46$$

$$\Rightarrow 2x = 46$$

$$\Rightarrow x = 23$$

So, average age of the team is 23 years.

**#52** [Explained](#) [Report](#) [Bookmark](#)

8 yrs ago Jyoti's age was equal to Swati's present age if sum of Jyoti's age 10yrs from now and Swati's age 6yrs ago is 88 yrs. What was Kusum's age 14 yrs ago if Kusum is 8 yrs younger to Swati?

null

- **A**  
22
- **B**  
14
- **C**  
25
- **D**  
16

Correct Answer :D

## Explanation



Let Swati's present age =  $x$  years Jyoti's present age =  $(x + 8)$  years According to question,

$$\Rightarrow x + 8 + 10 + x - 6 = 88$$

$$\Rightarrow 2x + 12 = 88$$

$$\Rightarrow x = 38$$

$$\text{Kusum's present age} = x - 8 = 30$$

$$\text{So, Kusum's age 14 years ago} = 30 - 14 = 16$$

**#53** [Explained](#) [Report](#) [Bookmark](#)

The average of the ages of Sumit, Krishna and Rishabh is 43 years and the average of the ages of Sumit, Rishabh and Rohit is 49 years. If Rohit is 54 years old, what is Krishna's age?

null

- **A**  
45 years
- **B**  
24 years
- **C**  
36 years
- **D**  
38 years

**Correct Answer :C**

## Explanation

Let present ages of Sumit =  $a$ , Krishna= $b$ , Rishabh= $c$  and Rohit= $d$  , then

$$a+b+c=43*3=129 \text{ ---(i) and } a+c+d=49*3=147 \text{ ---(ii)}$$

Subtracting (i) from (ii),  $(a+c+d) - (a+b+c)=147 - 129$ ,

$$d - a = 18 \text{ ---(iii)}$$

Given Rohit's age =  $d = 54$ , so from (iii),  $a=54-18= 36$

## #54 Explained Report Bookmark

The ages of two persons differ by 16 years. If 6 years ago, the elder one be 3 times as old as the younger one, find their present ages.

null

- **A**  
14 years, 30 years
- **B**  
28 years, 12 years
- **C**  
16 years, 32 years
- **D**  
24 years, 40 years

**Correct Answer :A**

## Explanation

Let the age of the younger person be  $x$  years. Then, age of the elder person =  $(x + 16)$  years. Therefore  $3(x - 6) = (x + 16 - 6)$

$$\Rightarrow 3x - 18 = x + 10$$

$$\Rightarrow 2x = 28$$

$$\Rightarrow x = 14.$$

Hence, their present ages are 14 years and 30 years.

### #55 **Explained** **Report** **Bookmark**

Mohan was 7 years younger to Raman 5 years back. After 5 years, the ratio of ages of Mohan and Jill will be 3 : 4. The sum of ages of Mohan and Jill is 53 years. Find the current age of Raman.(in years)

null

- **A**  
22
- **B**  
24
- **C**  
29
- **D**  
34

**Correct Answer :C**

## Explanation

Let the current age of Mohan be T years.

The sum of ages of Mohan and Jill is 53 years.

$$\Rightarrow \text{Age of Jill} = (53 - T) \text{ years}$$

After 5 years, the ratio of ages of Mohan and Jill will be 3 : 4

$$T + 5 / 53 - T + 5 = 3/4$$

$$\Rightarrow 4T + 20 = 174 - 3T$$

$$\Rightarrow T = 154/7 = 22$$

Mohan was 7 years younger to Raman 5 years back. Even now, Mohan would be 7 years younger to Raman. Current age of Raman = 29 years.

### #56 [Explained](#) [Report](#) [Bookmark](#)

Sneha is 8 years older than her cousin. Her cousin is 24 years younger than his mother. If the ratio between the ages of Sneha and her cousin's mother is 7 : 11. What will be the age of Sneha's cousin after 3 years?

null

- **A**  
21 years
- **B**  
20 years
- **C**  
26 years
- **D**  
23 years

**Correct Answer :D**

## Explanation

Let the age of Sneha =  $x$ , her cousin's age =  $x - 8$ , Cousin's mother age =  $x - 8 + 24$

Ratio between the ages of Sneha and her cousin's mother is 7 : 11

$$x : x + 16 = 7 : 11$$

$$11 \times x = (x + 16) \times 7$$

$$11x = 7x + 112$$

$$4x = 112$$

$$x = 28$$

$$\text{Sneha's cousin age} = 28 - 8 = 20$$

$$\text{After 3 years Sneha's cousin age} = 20 + 3 = 23 \text{ years}$$

**#57** [Explained](#) [Report](#) [Bookmark](#)

After 10 years, A's age will be twice that of B's age. A's present age is 6 times that of C. If B's eighth birthday was celebrated 2 years ago, then what is C's present age ?

null

- **A**  
8
- **B**  
5
- **C**  
10
- **D**  
15

**Correct Answer :B**

## Explanation

Let C's present age be  $x$  year. Then, A's present age =  $6x$ . Let B's present age be  $y$ .

Then, after 10 years,  $6x + 10 = 2(y + 10)$

$$\Rightarrow 6x + 10 = 2y + 20$$

$$\Rightarrow 6x - 2y = 10$$

$$\Rightarrow y = 3x - 5$$

'.' B's eighth birthday was celebrated 2 years ago, so, B's present age = 10.

Also, B's present age =  $y = 3x - 5$

$$\Rightarrow 10 = 3x - 5$$

$$\Rightarrow x = 15/3 = 5$$

**#58** [Explained](#) [Report](#) [Bookmark](#)

The sum of the ages of a father and his son is 45 years. Five years ago, the product of their ages was 34. The ages of the son and the father are respectively?

null

- **A**  
6 & 39
- **B**  
7 & 38
- **C**  
9 & 36
- **D**  
11 & 34

**Correct Answer :A**

## Explanation

Let the father age be 'x' years and son age be 'y' years. Given, The sum of the ages of father and his son is 45 years.

$$x + y = 45$$

$$\Rightarrow y = 45 - x \text{----- (i)}$$

Given, 5 years ago, the product of their ages was 34 years.

$$(x-5) * (y-5) = 34 \text{----- (ii)}$$

From (i) and (ii),

$$\Rightarrow (x - 5)(45 - x - 5) = 34$$

$$\Rightarrow (x - 5)(40 - x) = 34$$

$$\Rightarrow 40x - x^2 - 200 + 5x = 34$$

$$\Rightarrow -x^2 + 45x - 200 - 34 = 0$$

$$\Rightarrow x^2 - 45x + 234 = 0$$

$$\Rightarrow x^2 - 39x - 6x + 234 = 0$$

$$\Rightarrow x(x - 39) - 6(x - 39) = 0$$

$$\Rightarrow (x - 6)(x - 39) = 0$$

$$\Rightarrow x = 6, 39$$

Therefore, father's age is 39 years and Son's age is 6 years.

### #59 [Explained](#) [Report](#) [Bookmark](#)

Five years ago, the age of John was 5 times that of his son. After 5 years, his age will be 3 times that of his son. After how many years, will he be twice as old as his son?

null

- **A**  
15 years
- **B**  
25 years
- **C**  
30 years
- **D**  
40 years

**Correct Answer :B**

## Explanation

Let the present age of John be  $x$  and that of his son be  $y$  Forming equations

$$x - 5 = 5(y - 5) \quad x + 5 = 3(y + 5)$$

After solving we get  $x = 55$  and  $y = 15$

After how many years, he will be twice as old as son  $55 + x = 2(15 + x)$

$$x = 25 \text{ years}$$

### #60 [Explained](#) [Report](#) [Bookmark](#)



Shiva's age is  $\frac{1}{6}$ th of his father's age. Shiva's father, Vijay's age will be twice the age of Ravi's age after 10 years. If Ravi's tenth birthday was celebrated three years before, then what is Shiva's present age

null

- **A**  
5 years
- **B**  
6 years
- **C**  
8 years
- **D**  
5 years

**Correct Answer :B**

## Explanation

Let the present age of Ravi be  $x$ . As,

Ravi's tenth birthday was celebrated three years. So, his present age =  $10 + 3 = 13$  years

$\therefore$  Ravi's age after 10 years =  $10 + 13 = 23$  years. Let Shiva and vijay's age be  $S$  and  $V$  respectively. Then,

$$v + 10 = 2 * (10 + x)$$

$$\Rightarrow v + 10 = 20 + 2x$$

$$\Rightarrow v + 10 = 20 + 2 * 23$$

$$\Rightarrow v = 46 - 10$$

$$\Rightarrow v = 36$$

$$\therefore \text{Age of Shiva} = \frac{1}{6} * 36 = 6 \text{ years.}$$

## #61 Explained Report Bookmark

A can complete three-fifth of the work in 6 days and B can complete the two-seventh of the same work in 4 days. Then in how many days A and B together complete the work?

null

- **A**  
6  $\frac{3}{4}$  days
- **B**  
4  $\frac{7}{8}$  days
- **C**  
5  $\frac{5}{6}$  days
- **D**  
6  $\frac{1}{2}$  days

**Correct Answer :C**

## Explanation

A can complete  $\frac{3}{5}$ th of the work = 6 days

A can complete the whole work in =  $6 * (\frac{5}{3}) = 10$  days B can complete  $\frac{2}{7}$ th of the work = 4 days

B can complete the whole work in =  $4 * (\frac{7}{2}) = 14$  days (A + B)'s one day work =  $(\frac{1}{10}) + (\frac{1}{14}) = \frac{24}{(10*14)} = \frac{6}{35}$

A and B together can complete the work in,  $\frac{35}{6} = 5 \frac{5}{6}$  days

## #62 Explained Report Bookmark

If 4 men or 7 women can reap a field in 49 days, then what will be the time taken by 6 men and 14 women to reap the field?

null

- **A**  
12 days
- **B**  
10 days
- **C**  
16 days
- **D**  
14 days

Correct Answer :D

## Explanation

$$4m = 7w \Rightarrow 1m = 7/4w$$

$$7w \cdot 49 = (6m + 14w) \cdot x$$

$$7 \cdot 49 = 21/2 \cdot x \text{ (converted to women)}$$

$$X = 14$$

## #63 Explained Report Bookmark

A and B undertook to complete a piece of work for Rs. 4500. A can do it in 12 days, B can do it in 16 days and with the help of C, they complete the work in  $5 \frac{1}{3}$  days. Find the share of C?

null

- **A**  
850
- **B**  
1000
- **C**  
600
- **D**  
700

**Correct Answer :B**

## Explanation

$$1/12 + 1/16 + 1/C = 3/16$$

$$1/C = (3/16) - (1/12 + 1/16) \quad (1/C) = (3/16) - (7/48) = 1/24$$

C can do it in 24 days.

$$\text{Efficiency of A, B and C} = (1/12) : (1/16) : (1/24) = 4 : 3 : 2$$

$$9's = 4500$$

$$1's = 500$$

The share of C = Rs. 1000

**#64** **Explained** **Report** **Bookmark**

10 women and 6 men can do a work in 5 days. 7 women and 8 men can do a same work in 6 days. How long will 12 women and 3 men can take to do the work?

null

- **A**  
4  $\frac{3}{4}$  days
- **B**  
5  $\frac{1}{2}$  days
- **C**  
3  $\frac{5}{6}$  days
- **D**  
6  $\frac{1}{4}$  days

**Correct Answer :A**

## Explanation

Total work = (men (or) women)\*days Work equal,

$$(10w + 6m)*5 = (7w + 8m)*6 \quad 50w + 30m = 42w + 48m$$

$$8w = 18m$$

$$4w = 9m \Rightarrow 1w = \left(\frac{9}{4}\right) m$$

$$10w + 6m = 10*\left(\frac{9}{4}\right) m + 6m = \left(\frac{57}{2}\right) m$$

$$12w + 3m = 12*\left(\frac{9}{4}\right) m + 3 m = 30 m$$

Women      days

$$\left(\frac{57}{2}\right) \quad 5$$

$$30 \quad ?$$

$$\left(\frac{57}{2}\right)*5 = 30x$$

$$X = (57/2) * (5/30) = 4 \frac{9}{12} = 4 \frac{3}{4} \text{ days}$$

**#65** **Explained** **Report** **Bookmark**

25 men can complete a piece of work in 16 days. After 4 days from the start of the work, some men left. If the remaining work was completed by the remaining men in 15 days, then find the men left after 4 days from the start of the work?

null

- **A**  
3 men
- **B**  
4 men
- **C**  
6 men
- **D**  
5 men

**Correct Answer :D**

## Explanation

Total work = men\*days

Total units of work =  $25 * 16 = 400$  units Work done in 4 days =  $25 * 4 = 100$  units

Remaining work =  $400 - 100 = 300$  units Let the number of men left after 4 days be x, According to the question,

$$300/15 = 25 - x$$

$$20 = 25 - x$$

$$X = 5 \text{ men}$$

After 4 days from the start of the work, 5 men left the job.

## #66 [Explained](#) [Report](#) [Bookmark](#)

A and B can do a piece of work in 10 and 15 days respectively. They began the work together but A leaves after some days and B completed the remaining work in 8 days. Number of days after which A left the job?

null

- **A**  
2  $\frac{4}{5}$  days
- **B**  
4  $\frac{1}{2}$  days
- **C**  
3  $\frac{3}{4}$  days
- **D**  
5  $\frac{1}{3}$  days

**Correct Answer :A**

## Explanation

$$\frac{1}{10} + \frac{1}{15}) * x + \frac{8}{15} = 1 \quad (\frac{1}{10} + \frac{1}{15}) * x = 1 - (\frac{8}{15}) \quad (\frac{1}{10} + \frac{1}{15}) * x = \frac{7}{15}$$

$$x/6 = 7/15 \quad x = 14/5$$

$$X = 2 \frac{4}{5} \text{ days}$$

## #67 [Explained](#) [Report](#) [Bookmark](#)

P, Q and R can complete the whole work in 20 days. P starts the work and works for 'x' days while Q and R complete the remaining  $\frac{2}{5}$  of the work in 14 days then find the value of x?

null

- **A**  
24 days
- **B**  
28 days
- **C**  
32 days
- **D**  
20 days

**Correct Answer :B**

## Explanation

Time required by Q and R to complete the whole work

$$= 5 \times 14 / 2 = 35 \text{ days}$$

Time taken by P, Q and R = 20 days Total units of work = 140 units

Q and R one day work = 4 units P, Q and R one day work = 7 units P's one day work =  $7 - 4 = 3$  units

Units of work done by P =  $3 \times 140 / 5 = 84$  units Required value of  $x = 84 / 3 = 28$  days

**#68** **Explained** **Report** **Bookmark**

P takes 8 days to complete  $2/3$  of a work, Q takes 3 days to complete  $1/7$  of the same work and R takes 8 days to complete  $4/5$  of the same work. If they work for 3 days together then Q and R leaves the work. Find the number of days P will take to complete the remaining work?

null



- **A**  
117/28 days
- **B**  
95/23 days
- **C**  
156/25 days
- **D**  
129/35 days

**Correct Answer :D**

## Explanation

Time taken by P=  $8 \times \frac{3}{2} = 12$  days Q=  $7 \times 3 = 21$  days

R=  $8 \times \frac{5}{4} = 10$  days

Total units of work = 420 units P's one day work= 35 units Q's one day work= 20 units R's one day work= 42 units

Work done in 3 days=  $97 \times 3 = 291$  units

Time required by P to complete the remaining work

=  $> (420-291)/35 = 129/35$  days

**#69** **Explained** **Report** **Bookmark**

20 men can complete a piece of work in 16 days. After 5 days from the start of the work, some men left. If the remaining work was completed by the remaining men  $18\frac{1}{3}$  days, how many men left after 5 days from the start of the work?

- **A**  
10 men

- **B**  
9 men
- **C**  
8 men
- **D**  
6 men

**Correct Answer :C**

## Explanation

Given,

20 men complete a work in = 16 days

Formula:

Total work = Efficiency  $\times$  Time

$$M_1 \times D_1 = M_2 \times D_2$$

Calculation:

Work done by 20 men in 16 days =  $20 \times 16 = 320$

Work done by 20 men in 5 days =  $20 \times 5 = 100$

Remaining work =  $320 - 100 = 220$

Let the number of men left after 5 days be x So,

20-x men completed the remaining 220 units in  $55/3$  days

So,

$$(20-x) \cdot 55/3 = 220$$

$$1100 - 55x = 660$$

$$55x = 440$$

$$X = 8 \text{ men}$$

### #70 [Explained](#) [Report](#) [Bookmark](#)

6 men and 5 women can do a work in 10 days. 4 men and 7 women can do a same work in 12 days. How long will 6 women and 12 men can take to do the work?

- **A**  
8 days
- **B**  
10 days
- **C**  
5 ½ days
- **D**  
6 ¾ days

**Correct Answer :C**

## Explanation

Here work equal. So,

$$(6m + 5w) \cdot 10 = (4m + 7w) \cdot 12 \quad 60m + 50w = 48m + 84w$$

$$12m = 34w$$

$$6m = 17w$$

$$6m + 5w = 17w + 5w = 22w$$

$$12m + 6w = 34w + 6w = 40w$$

Women days

$$22 \quad 10$$

$$40 \quad ?$$

$$(22 \times 10) = (40 \times x)$$

$$X = (220/40) = 5 \frac{1}{2} \text{ days}$$

#71 [Explained](#) [Report](#) [Bookmark](#)

P can do a piece of work in 18 days. Q is 20 percent more efficient than P. Then in how many days three-fourth of the work is completed when both are working simultaneously?

null

- **A**  
7 5/13 days
- **B**  
9 4/7 days
- **C**  
6 3/22 days
- **D**  
8 6/17 days

**Correct Answer :C**

## Explanation

Efficiency ratio =  $\Rightarrow Q : P = 6 : 5$

Days ratio =  $\Rightarrow Q : P = 5 : 6$

P can do a piece of work in 18 days

6's = 18  $\Rightarrow$  1's = 3

So Q can complete the work in 15 days  $(1/18 + 1/15) * x = 3/4$

$[33/(18*15)] * x = 3/4$

$X = 135/22$  days =  $6 \frac{3}{22}$  days

**#72** [Explained](#) [Report](#) [Bookmark](#)

Ganesh and Ragu can separately do a piece of work in 25 and 20 days respectively. They worked together for 8 days, after which Ragu was replaced by Rohit. If the work was finished in next  $3 \frac{1}{2}$  days, then the number of days in which Rohit alone could do the work will be?

null

- [A](#)  
28 days

- **B**  
21 days
- **C**  
30 days
- **D**  
25 days

**Correct Answer :D**

## Explanation

Ganesh and Ragu's one day work =  $(1/25) + (1/20) = 45/(25 \times 20) = 9/100$

Ganesh and Ragu's 8 day work =  $(9/100) \times 8 = 18/25$

Remaining work  $7/25$  done by Ganesh and Rohit Ganesh and Rohit finished it in  $3 \frac{1}{2}$  days  $(7/25) \times (\text{Ganesh} + \text{Rohit})\text{'s whole work} = (7/2) (\text{Ganesh} + \text{Rohit})\text{'s whole work} = 25/2$

Rohit's one day work =  $(2/25) - (1/25) = 1/25$  Rohit alone can complete the work in 25 days

**#73** **Explained** **Report** **Bookmark**

15 men can complete a work in 12 days. 4 days after they started the work, 3 men left and 8 more men joined. How many days will it take to complete the remaining work?

null

- **A**  
8 days

- **B**  
4 days
- **C**  
6 days
- **D**  
10 days

**Correct Answer :C**

## Explanation

Total work = men \* days Total work =  $15 \times 12 = 180$  4 days work =  $15 \times 4 = 60$

Remaining work =  $180 - 60 = 120$  work

Now, the total men =  $15 - 3 + 8 = 20$  men Remaining work can be completed in,

= >  $120/20 = 6$  days

Remaining work can complete it in 6 days

**#74** [Explained](#) [Report](#) [Bookmark](#)

7 men and 9 women can complete a piece of work in 10 days while 5 men and 5 women can complete the same work in 15 days. Then find 10 men and 8 women to complete the same work in?

null

- **A**  
9 11/15 days
- **B**  
7 17/19 days
- **C**  
11 3/7 days
- **D**  
12 5/6 days

**Correct Answer :B**

## Explanation

Here work equal. So,

$$(7m + 9w) \times 10 = (5m + 5w) \times 15 \quad 70m + 90w = 75m + 75w$$

$$15w = 5m$$

$$3w = 1m$$

$$7m + 9w = 21w + 9w = 30w$$

$$10m + 8w = 30w + 8w = 38w$$

Women days

$$30 \qquad 10$$

$$38 \qquad ?$$



$$(30 \times 10) = (38 \times x)$$

$$X = (300/38) = 7 \frac{17}{19} \text{ days}$$

#75 **Explained** **Report** **Bookmark**

Two men undertook to do a piece of work for Rs. 6000. One alone could do it in 15 days and the other can do it in 12 days, while with the assistance of a boy, work gets completed in 5 days. Find the share of boy?

null

- **A**  
1500
- **B**  
2750
- **C**  
2500
- **D**  
2000

**Correct Answer :A**

## Explanation

$$(1/15) + (1/12) + 1 \text{ boy} = (1/5) \quad 1 \text{ boy} = (1/5) - [(1/15) + (1/12)]$$

$$1 \text{ boy} = (1/5) - (3/20) = (4 - 3)/20 = 1/20$$

The share of two men and a boy =  $(1/15): (1/12): (1/20)$

= > 4: 5: 3

12's = 6000

1's = 500

The share of boy = Rs. 1500

**#76** [Explained](#) [Report](#) [Bookmark](#)

9 women and 5 men can do a work in 9 days. 8 women and 9 men can do a same work in 6 days. How long will 5 women and 9 men can take to do the work?

null

- **A**  
6 9/19 days
- **B**  
7 5/11 days
- **C**  
8 3/7 days
- **D**  
5 1/5 days

**Correct Answer :A**

## Explanation

Total work = (men (or) women)\*days Work equal,

$$(9w + 5m)*9 = (8w + 9m)*6 \quad 81w + 45m = 48w + 54m$$

$$33w = 9m \quad 11w = 3m \quad m = 11/3$$

$$9w + 5m = 9w + (55/3)w = (82/3)w$$

$$5w + 9m = 5w + 33w = 38w$$

Women      days

$$(82/3) \qquad 9$$

$$38 \qquad ?$$

$$(82/3) \cdot 9 = 38x$$

$$X = (41 \cdot 3)/19 = 123/19 = 6 \frac{9}{19} \text{ days}$$

**#77** [Explained](#) [Report](#) [Bookmark](#)

If 6 men or 9 women can reap a field in 69 days, then what will be the time taken by 10 men and 8 women to reap the field?

null

- **A**  
30 days
- **B**  
21 days
- **C**  
25 days
- **D**  
27 days

**Correct Answer :D**

## Explanation

$$6m=9w \rightarrow 2m=3w$$

$$9w \cdot 69 = 23w \cdot x (\text{converted to women}) \quad X=27$$

#78 **Explained** **Report** **Bookmark**

Karthi is 40% more efficient than Rajesh, and Karthi can alone do a work in 20 days. If they working in alternative days starts with Karthi, then in how many days the work will get completed?

null

- **A**  
21 (1/7) days
- **B**  
26 (2/5) days
- **C**  
18 (6/17) days
- **D**  
23 (1/5) days

**Correct Answer :D**

## Explanation

The ratio of Efficiency of Karthi and Rajesh= 140:100

$$= 7:5$$

Then work ratio of Karthi and Rajesh=5:7 Now given that, Karthi's one day's work=  $\frac{1}{20}$  Then Rajesh's one day's work=  $\frac{1}{28}$

Thus in two days, the work done by them=  $\frac{1}{20} + \frac{1}{28} = \frac{12}{140}$

Then work done by them in 22 days=  $(\frac{12}{140} \cdot 11) / \frac{140}{12}$

$$= 132/140$$

$$\text{Work done by them in 23 days} = (132/140) + (1/20) = 139/140$$

$$\text{Remaining work} = 1 - (139/140) = 1/140$$

$$\text{Remaining work done by Rajesh in} = (1/140) \times 28 = (1/5) \text{ days}$$

$$\text{Thus total days to complete the work} = 23 + (1/5) = 23 \frac{1}{5} \text{ days}$$

### #79 **Explained** **Report** **Bookmark**

5 men can complete a work in 12 days, 8 women can complete it in 18 days and 10 children can complete the same work in 24 days. In how many days can 10 men, 12 women and 8 children complete the same work

null

- **A**  
3 9/17 days
- **B**  
4 2/9 days
- **C**  
5 3/7 days
- **D**  
6 6/11 days

**Correct Answer :A**

## Explanation

$$1 \text{ man's } 1 \text{ day's work} = 1/60$$

$$1 \text{ woman's } 1 \text{ day's work} = 1/144 \quad 1 \text{ child's } 1 \text{ day's work} = 1/240 \quad \text{So,}$$

Required days =  $(10/60 + 12/144 + 8/240)$

=  $1/6 + 1/12 + 1/30$

=  $17/60$

Required days =  $60/17 = 3 \frac{9}{17}$  days

**#80** [Explained](#) [Report](#) [Bookmark](#)

4 men or 6 women or 9 boys can finish a work in 98 days, and then the number of days taken by 6 men, 4 women and 5 boys to finish the work is?

null

- **A**  
28 days
- **B**  
32 days
- **C**  
24 days
- **D**  
36 days

**Correct Answer :D**

## Explanation

4 men = 9 boys  $\Rightarrow$  1 man =  $9/4$  boys

6 women = 9 boys  $\Rightarrow$  1 woman =  $3/2$  boys

6 men + 4 women + 5 boys =  $(6 \times 9/4) + (4 \times 3/2) + 5 = 49/2$  boys

Boys              days

$$9 \qquad 98$$

$$49/2 \qquad ?$$

$$\text{Now, } B_1 \cdot D_1 = B_2 \cdot D_2 \quad 9 \cdot 98 = 49/2 \cdot D_2$$

$$D_2 = 36 \text{ days}$$

### #81 **Explained** **Report** **Bookmark**

A train 200 m long running at 36 kmph takes 55 seconds to cross a bridge. The length of the bridge is

null

- **A**  
375 m
- **B**  
300 m.
- **C**  
350 m.
- **D**  
. 325 m.

**Correct Answer :C**

## Explanation

Speed of train = 36 kmph

$$= 36 \times (5 / 18) = 10 \text{ m / sec}$$

If the length of bridge be x metre, then  $10 = (200 + x) / 55$

$$200 + x = 550$$

$$x = 550 - 200 = 350 \text{ metre}$$

**#82** [Explained](#) [Report](#) [Bookmark](#)

A train 250m long takes 30s to cross a man running at a speed of 6kmph in the direction opposite to that of train. What is the speed of the train?

null

- **A**  
0kmph
- **B**  
22kmph
- **C**  
23kmph
- **D**  
24kmph

**Correct Answer :D**

## Explanation

Speed = x

$$\text{Relative speed} = (x+6)\text{kmph} \quad (x+6) = (250 \times 18) / (30 \times 5) \quad (x+6) = (4500) / (150)$$

$$X+6 = 30$$

$$X = 30 - 6 = 24\text{kmph}$$

**#83** [Explained](#) [Report](#) [Bookmark](#)

A train 160m long passes a standing man in 25s. What is the speed of the train ?



null

- **A**  
1kmph
- **B**  
23kmph
- **C**  
25kmph
- **D**  
27kmph

**Correct Answer :B**

## Explanation

$$\text{Speed} = (160 \times 18) / (25 \times 5)$$

$$= 2880 / 125 = 23.04 = 23\text{kmph}$$

**#84** [Explained](#) [Report](#) [Bookmark](#)

A train 350m long takes 35s to cross a man running at a speed of 5kmph in the direction same to that of train. What is the speed of the train?

null

- **A**  
0kmph
- **B**  
41kmph
- **C**  
42kmph
- **D**  
43kmph

**Correct Answer :B**

## Explanation

Speed = x

Relative speed = (x-5)kmph (x-5) = ( 350×18)/(35×5)

(x-5) = ( 6300)/(175) X-5 = 36

X = 36 + 5 = 41kmph

#85 **Explained** **Report** **Bookmark**

Without stopping the speed of the train is 120kmph, with stopping the speed of the train is 80kmph. Find the stop time of the train ?

null

- **A**  
10m
- **B**  
15m
- **C**  
20m
- **D**  
25m

**Correct Answer :C**

## Explanation

Stopping time = (120 – 80 )/ 120 = 40/120 = 1/3h

= 60/3 = 20 min

### #86 [Explained](#) [Report](#) [Bookmark](#)

Two trains approach each other at 20kmph and 24kmph from 2 places 240km apart. After how many hours they will meet ?

null

- **A**  
5hrs
- **B**  
5.25hrs
- **C**  
5.30hrs
- **D**  
5.45hrs

Correct Answer :D

## Explanation

$$20x + 24x = 240$$

$$44x = 240$$

$$X = 240/44 = 5.45\text{hrs}$$

### #87 [Explained](#) [Report](#) [Bookmark](#)

A train 120m long passes an electric pole in 6s. How long will it take to cross a bridge of 240m long ?

null

- **A**  
18s
- **B**  
16m
- **C**  
13m
- **D**  
15s

**Correct Answer :A**

## Explanation

$$\text{Speed} = 120/6 = 20\text{m/s}$$

$$\text{Time taken to cross the bridge} = (120+240)/20$$

$$= 360/20$$

$$= 18\text{s}$$

**#88** [Explained](#) [Report](#) [Bookmark](#)

**A 120m long train is crosses the platform double its length in 30sec. What is the speed of the train ?**

null

- **A**  
42kmph
- **B**  
43kmph
- **C**  
44kmph
- **D**  
40kmph

Correct Answer :B

## Explanation

$$120+240 / 30 =12$$

$$12*18/5 = 43.2 = 43\text{kmph}$$

#89 [Explained](#) [Report](#) [Bookmark](#)

A 1km long wire is held by n poles, if 1 pole is removed the length of the gap is increased by  $\frac{5}{3}\text{m}$ . What is the no of poles initially ?

null

- [A](#)  
24
- [B](#)  
26
- [C](#)  
23
- [D](#)  
22

Correct Answer :B

## Explanation

$$[1000/(n-2)] [1000/(n-1)] = \frac{5}{3} n = 26$$

#90 [Explained](#) [Report](#) [Bookmark](#)

P starts chasing a Q , 3hrs after the Q starts running. P takes 4hours to catch the Q. If the average speed of the P is 35kmph, Find the average speed of the Q ?

null

- **A**  
30kmph
- **B**  
16kmpg
- **C**  
24kmph
- **D**  
20kmph

**Correct Answer :D**

## Explanation

Distance P covers =  $35 \times 4 = 140$  After 3hrs =  $4 + 3 = 7$

Avg speed of Q =  $140 / 7 = 20\text{kmph}$

**#91** **Explained** **Report** **Bookmark**

Nakiren travelled 1200km by air which formed  $\frac{2}{5}$  of his trip. One third of the whole trip, he travelled by train and the rest of the journey by car. Find the distance travelled by car ?

null

- **A**  
850km
- **B**  
800km
- **C**  
700km
- **D**  
650km

**Correct Answer :B**

## Explanation

$$2x/5 = 1200 \dots\dots\dots \text{air}$$

$$X = 3000\text{km} \dots\dots\dots \text{total distance}$$

$$3000/3 = 1000\text{km} \dots\dots\dots \text{train}$$

$$\text{Train} = 3000 - (1200 + 1000) = 800\text{km}(\text{car})$$

**#92** [Explained](#) [Report](#) [Bookmark](#)

If a car runs at 45km/hr, it reaches its destination late by 10 min but if runs at 60km/hr it is late by 4min. What is the correct time for the journey?

null

- **A**  
24min
- **B**  
14min
- **C**  
32min
- **D**  
20min

**Correct Answer :B**

## Explanation

$$\text{Distance} = \text{diff in time} * (S1 * S2) / S1 - S2$$

$$D = [10 - 4] / 60\text{hr} * (45 * 60) / [60 - 45] = 6 / 60 * 45 * 60 / 15$$

$\Rightarrow 18\text{km}$

time  $T = D/S$  (take any one of the speed.  $18/45 = 2/5\text{hrs} = 2/5 * 60 = 24\text{min}$ )

then correct time is  $24 - 10 = 14\text{mins}$ .

### #93 [Explained](#) [Report](#) [Bookmark](#)

A bike rider starts at  $40\text{km/hr}$  and he increases his speed in every 1 hour by  $2\text{km/hr}$ . Then the maximum distance covered by him in 24 hrs is:

null

- **A**  
682km
- **B**  
540km
- **C**  
620km
- **D**  
612km

**Correct Answer :D**

## Explanation

Speed of the rider:  $40\text{km/hr}$

He increases his speed in every 1 hr by  $2\text{km/hr}$ . Distance covered by every 1 hr

will be 40, 42, 44, .... upto 12 terms. i.e. (for 24hrs)

Sum of 1st n terms  $= n/2 (2a + (n-1)d)$ .

$$12/2 * (2*40 + 11*2) \Rightarrow 12/2 * (80 + 22) \Rightarrow 612\text{km}$$



**#94** Explained Report Bookmark

A man takes 4hrs 30min in walking to a certain place and riding back. He would have gained 2hrs by riding both ways. The time he would take to walk both ways, is:

- **A**  
5hrs10min
- **B**  
4hrs30min
- **C**  
7hrs
- **D**  
5hrs40min

**Correct Answer :C**

## Explanation

$W+R = 4\text{hrs } 30\text{min}$  ie  $9/2\text{hrs}$

Time taken to ride one way

$$R+R=2\text{hrs} \implies R=1\text{hr}$$

Time is taken to walk one way

$$\text{then } 4.30(4\text{hrs } 30\text{min}) - 1 = 3\text{hour } .30\text{ min}$$

Time is taken to walk both ways

$$2W = 3\text{hour } .30\text{ min}$$

$$W = 7/2 * 2 = 7\text{hrs}$$

### #95 [Explained](#) [Report](#) [Bookmark](#)

Two trains of equal lengths take 10 seconds and 15 seconds respectively to cross a telegraph post. If the length of each train be 300 metres, in what time will they cross each other travelling in opposite direction?

null

- **A**  
25 sec
- **B**  
18 sec
- **C**  
14 sec
- **D**  
12 sec

Correct Answer :D

## Explanation

Speed of the first train =  $[300/10]$  m/sec = 30 m/sec. Speed of the second train =  $[300/15]$  m/sec = 20 m/sec. speed =  $(30 + 20)$  m/sec = 50m/sec.

Required time =  $(300+300)/50\text{secc} = 12 \text{ sec.}$

### #96 [Explained](#) [Report](#) [Bookmark](#)

A person sees a train passing over 3km long bridge. The length of the train is half that of bridge if the train clears the bridge in 4mins. What is the speed of the train ?

null

- **A**  
67.5 km/hr

- **B**  
50 km/hr
- **C**  
62 km/hr
- **D**  
48 km/hr

**Correct Answer :A**

## Explanation

Distance covered in  $\frac{4}{60}$  hours =  $(3 + \frac{3}{2}) = \frac{9}{2}$  km

Distance covered in 1 hour =  $(\frac{9}{2}) \times (\frac{60}{4}) = 67.5$  km/hr.

So, speed of the train = 67.5 km/hr

**#97** [Explained](#) [Report](#) [Bookmark](#)

Two trains are running at 60 km/hr and 40 km/hr respectively in the same direction. Faster train completely passes a man sitting in the slower train in 54 seconds. What is the length of the fast train?

null

- **A**  
100 m
- **B**  
150 m
- **C**  
300 m
- **D**  
200 m

**Correct Answer :C**

## Explanation

Relative speed =  $(60 - 40) \text{ km/hr} = 20 \text{ km/hr}$ .

Length of the faster train =  $(20 \times 54 \times 5) / 18 = 300 \text{ m}$

#98 **Explained** **Report** **Bookmark**

A truck running from a city at a speed of 40 km/hr and the speed of the truck was increased by 2 km/hr at the end of every hour. Find the total distance covered by the truck in the first 5 hours of the journey.

null

- **A**  
180 km
- **B**  
120 km
- **C**  
220 km
- **D**  
90 km

**Correct Answer :C**

## Explanation

The total distance covered by the truck in the first 5 hours

$$= 40 + 42 + 44 + 46 + 48$$

sum of five terms in AP whose first term is 40

and last term is 48 =  $\frac{5}{2} [40 + 48] = 220 \text{ km}$ .

### #99 [Explained](#) [Report](#) [Bookmark](#)

Two persons start running simultaneously around a rectangular track of length 700 m from the same point at speeds of 45 km/hr and 25 km/hr. When will they meet for the first time any where on the track if they are moving in opposite directions?

null

- **A**  
50 sec
- **B**  
42 sec
- **C**  
25 sec
- **D**  
36 sec

Correct Answer :D

## Explanation

Time taken to meet for the first time = length of the track

/ relative speed =  $700 / (45 + 25)$

=  $(700 \times 18) / (70 \times 5) = 36 \text{ sec.}$

### #100 [Explained](#) [Report](#) [Bookmark](#)

I walk a certain distance and ride back taking a total time of 37 minutes. I could walk both ways in 55 minutes. How long would it take me to ride both ways?

null

- **A**  
19 min

- **B**  
13 min
- **C**  
12 min
- **D**  
11min

**Correct Answer :A**

## Explanation

Let the distance be  $x$ , then,

(Time taken to walk  $x$  km) + (Time taken to ride  $x$  km) = 37min.

$\Rightarrow$  (Time taken to walk  $2x$  km) + (Time taken to ride  $2x$  km) = 74 min.

But, time taken to walk  $2x$  km = 55 min.

So, Time to ride  $2x$  km =  $(74 - 55)$  min  $\Rightarrow$  19 min.

**#101** [Explained](#) [Report](#) [Bookmark](#)

**The sum of three numbers is 98. If the ratio of the first to the second is 2:3 and that of second to the third is 5 : 8 then the second number is?**

- **A**  
20
- **B**  
30
- **C**  
38

- **D**  
48

Correct Answer :B

## Explanation

a:b b:c

2:3 5:8

a:b:c = > 2 X 5 : 5 X 3 : 8 X 3

a:b:c=>10:15:24

49K =98

therefore k =2 => b= 15 X 2 = 30

**#102** **Explained** **Report** **Bookmark**

Rs. 73689 are divided between A and B in the ratio 4:7. What is the difference between thrice the share of A and twice the share of B ?

- **A**  
Rs. 36699
- **B**  
. Rs. 46893
- **C**  
Rs. 20097
- **D**  
Rs. 13398

Correct Answer :D

## Explanation

2 X share of B – 3 X share of A.

$$= 2 \times \frac{7}{11} - 3 \times \frac{4}{11}$$

$$= \frac{14}{11} - \frac{12}{11} = \frac{2}{11}$$

$$\Rightarrow \frac{2}{11} \times 73689 = 6699 \times 2 = 13398.$$

#103 [Explained](#) [Report](#) [Bookmark](#)

The total number of students in a school is 31700. If the ratio of boys to the girls in the school is 743:842 respectively, what is the total number of girls in the school?

- **A**  
14860
- **B**  
16480
- **C**  
15340
- **D**  
16840

**Correct Answer :D**

## Explanation

Boys : Girls = 743 : 842

Total number of students = 31700

Number of girls =  $\left[ \frac{842}{(743 + 842)} \right] \times 31700 = \left( \frac{842}{1585} \right) \times 31700$



$$1585) \times 31700$$

$$= 16840$$

#### #104 [Explained](#) [Report](#) [Bookmark](#)

A sum of Rs. 10,980 is to be divided amongst A, B and C in the ratio 7:3:5 respectively. How much is C's share?

- [A](#)  
3660
- [B](#)  
3600
- [C](#)  
3,650
- [D](#)  
3,124

Correct Answer :A

## Explanation

$$\text{C's share} = (5 / 15) \times 10980 = \text{Rs. } 3660$$

#### #105 [Explained](#) [Report](#) [Bookmark](#)

A sum of Rs. 10,980 is to be divided amongst A, B and C in the ratio 7:3:5 respectively. What is the sum of B's and C's share?

null

- [A](#)  
5,685
- [B](#)  
5,865
- [C](#)  
5,897

- **D**  
5856

Correct Answer :D

## Explanation

$$(B + C)'s \text{ share} = [(3+5) / 15] \times 10980$$

$$=( 8 / 15) \times 10980 = \text{Rs. } 5856$$

#106 **Explained** **Report** **Bookmark**

A sum of Rs. 10,980 is to be divided amongst A, B and C in the ratio 7:3:5 respectively. What is the difference between A's and B's shares?

- **A**  
2,196
- **B**  
2,961
- **C**  
. 2,928
- **D**  
2,289

Correct Answer :C

## Explanation

$$\text{Required difference} = \text{Rs. } [(7-3) / 15] \times 10980 = \text{Rs. } 2928$$

#107 **Explained** **Report** **Bookmark**

A sum of Rs. 221 is divided among X, Y and Z such that X gets Rs. 52 more than Y. Y gets Rs. 26 more than Z. The ratio of the shares of X , Y and Z respectively is

null

- **A**  
9:5:3
- **B**  
9:3:5
- **C**  
5:9:3
- **D**  
10:6:5

**Correct Answer :A**

## Explanation

221 is divided among X, Y and Z. Y gets Rs.(Z + 26)

X gets Rs. (Z + 26 + 52) = Rs. (Z + 78)

According to the question  $Z + 78 + Z + 26 + Z = 221$

$$\Rightarrow 3Z + 104 = 221$$

$$\Rightarrow Z = 117/3$$

$$\Rightarrow Z = 39$$

$$X = 39 + 78 = 117$$

$$Y = 39 + 26 = 65$$

$$Z = 39$$

$$117 : 65 : 39 = 9 : 5 : 3$$

#108 [Explained](#) [Report](#) [Bookmark](#)

If 50% of a certain number is equal to  $\frac{3}{4}$ th of the another number, what is the ratio between the number?

null

- [A](#)  
3:2
- [B](#)  
2:5
- [C](#)  
5:2
- [D](#)  
3:4

Correct Answer :A

## Explanation

Let the one number be x and another number y Then, 50% of x =  $\frac{3y}{4}$

$$\Rightarrow 50 * \frac{x}{100} = \frac{3y}{4}$$

$$\Rightarrow \frac{x}{y} = \frac{3}{2} = 3:2$$

#109 [Explained](#) [Report](#) [Bookmark](#)

Ratio of the earning of A and B is 4 : 7 respectively. If the earnings of A increase by 50% and the earnings of B decrease by 25%, the new ratio of their earnings becomes 8 :7 respectively. What are A's earnings?

null

- **A**  
26000
- **B**  
28000
- **C**  
21000
- **D**  
Data inadequate

**Correct Answer :D**

## Explanation

Let the original earnings of A and B be Rs.  $4x$  and Rs.  $7x$ .

New earnings of A = 150% of Rs.  $4x$  =  $(150/100 * 4x)$  = Rs.  $6x$

New earnings of B = 75% of Rs.  $7x$  =  $(75/100 * 7x)$  = Rs.  $21x/4$

$$6x:21x/4 = 8:7$$

This does not give  $x$ . So, the given data is inadequate.

**#110** **Explained** **Report** **Bookmark**

The cost of making an article is divided between materials, labour and overheads in the ratio of 3:4:1. If the material cost Rs. 234, then the labour cost?

null

- **A**  
176
- **B**  
Rs 312

- **C**  
78
- **D**  
390

**Correct Answer :B**

## Explanation

Cost of making is divided among material :labour : overheads = 3: 4: 1

Total material cosy = Rs. 234  $3x = 234$

$\Rightarrow x = 78$

$\Rightarrow$  Labor cost =  $4 \times 78 = \text{Rs. } 312$

**#111** **Explained** **Report** **Bookmark**

The ages of Mira, Tina and Sania are in the ratio of 6 : 4 : 7 respectively. If the sum of their ages is 34 years, what is Sania's age?

null

- **A**  
12 yr
- **B**  
10 yr
- **C**  
18 yr
- **D**  
14 yr

**Correct Answer :D**

## Explanation

Ratio of the ages of Mira, Tina and Sania = 6: 4: 7 Let there age be  $6x$ :  $4x$ :  $7x$

According to the question,  $6x + 4x + 7x = 34$

$$\Rightarrow 17x = 34$$

$$\Rightarrow x = 2$$

Sania age =  $7x = 7 \times 2 = 14$  yr.

#112 [Explained](#) [Report](#) [Bookmark](#)

In a school the number of boys and that of the girls are in the respective ratio of 2:3. If the number of boys is increased by 20% and that of girls is increased by 10%, what will be the new ratio of number of boys to that of the girls?

null

- **A**  
14:5
- **B**  
5:8
- **C**  
8:11
- **D**  
Data inadequate

Correct Answer :C

## Explanation

Ratio of boys and girls in the school = 2:3

New, increased value =  $2 * 120/100 : 3 * 110/100 = 240 : 330$

$\Rightarrow 24 : 33 = 8 : 11$

#113 [Explained](#) [Report](#) [Bookmark](#)

When  $x$  is subtracted from the numbers 9, 15 and 27, the remainders are in continued proportion. What is the value of  $x$ ?

null

- [A](#)  
7
- [B](#)  
5
- [C](#)  
3
- [D](#)  
4

Correct Answer :C

## Explanation

From the given question:

$$(9 - x)/(15 - x) = (15 - x)/(27 - x)$$

$$\Rightarrow (15 - x)^2 = (9 - x)(27 - x)$$

$$\Rightarrow 225 - 30x + x^2 = 243 + x^2 - 36x$$

$$\Rightarrow 6x = 18$$

$$\Rightarrow x = 3$$



### #114 [Explained](#) [Report](#) [Bookmark](#)

The price of sugar is increased by 20%. If the expenditure is not allowed to increase, the ratio between the reduction in consumption and the original consumption is?

null

- [A](#)  
1:3
- [B](#)  
1:4
- [C](#)  
1:6
- [D](#)  
1:5

Correct Answer :C

## Explanation

Let the price of sugar was Rs.  $x$  per kg.

After increase in price, new price per kg =  $x + x * 20/100$

$$= 6x/5$$

For Rs.  $6x/5$  we get 1 kg. Of sugar For Rs. 1 we get  $5/6x$  kg. Of sugar For Rs.  $x$  we get  $5/6$  kg. Of sugar

Decrease in consumption of sugar =  $1 - 5/6 = 1/6$  So, the required ratio =  $1/6:1 = 1/6$

### #115 [Explained](#) [Report](#) [Bookmark](#)

The ratio between two numbers is 2:3. If each numbers is increased by 4, the ratio between then become 5:7, the difference between numbers.

null

- **A**  
8
- **B**  
6
- **C**  
4
- **D**  
2

Correct Answer :A

## Explanation

Ratio between two numbers = 2:3

Let x is the common factor between the ratio  $(2x + 4)/(3x + 4) = 5/7$

$$\Rightarrow 14x + 28 = 15x + 20$$

$$\Rightarrow x = 8$$

$$\Rightarrow \text{Required difference} = (3x - 2x) = 8$$

**#116** [Explained](#) [Report](#) [Bookmark](#)

**Seats for Mathematics, Physics and Biology in a school are in the ratio 5 : 7 : 8. There is a proposal to increase these seats by 40%, 50% and 75% respectively. What will be the ratio of increased seats?**

null

- **A**  
2:3:4
- **B**  
6:7:8
- **C**  
6:8:9
- **D**  
Cannot be determined

**Correct Answer :A**

## Explanation

let the number of seats for Mathematics, Physics and Biology be  $5x$ ,  $7x$  and  $8x$  respectively.

Number of increased seats are (140% of  $5x$ ), (150% of  $7x$ ) and (175% of  $8x$ ).

$$\Rightarrow (140/100) * 5x : (150/100) * 7x : (175/100) * 8x$$

$$\Rightarrow \text{The required ratio} = 7x : 21x/2 : 14x$$

$$\Rightarrow 14x : 21x : 28x$$

$$\Rightarrow 2 : 3 : 4$$

**#117** [Explained](#) [Report](#) [Bookmark](#)

The salaries A, B and C are in the ratio 2 : 3 : 5. If their salaries were increased by 15%, 10% and 20% respectively, what will be new respective ratio of their salaries?

null

- **A**  
3:3:10
- **B**  
23:33:60
- **C**  
Cannot be determined
- **D**  
None of these

**Correct Answer :B**

## Explanation

Ratio of salaries of A, B and C = 2:3:5 Ratio after increasing in the value

$$= 2 * 115/100 : 3 * 110/100 : 5 * 120/100$$

$$= 230 : 330 : 600$$

$$= 23:33:60$$

**#118** [Explained](#) [Report](#) [Bookmark](#)

Production of company A is 120% of the production of company B and 80% of the production of company C. What is the ratio between the productions of companies A, B, and C respectively?

null

- **A**  
6:5:4
- **B**  
6:5:4
- **C**  
12:10:15

- **D**  
10:12:15

**Correct Answer :C**

## Explanation

Let the production of company B be x and that of company C be y

Production of company A is 120% of B = 120% of x =  $6x/5$

Production of company A is 80% of C = 80% of y =  $4y/5$

$$\Rightarrow 6x/5 = 4y/5$$

$$\Rightarrow y = 3x/2$$

$$\text{Required ratio} = 6x/5 : x : y = 6x/5 : x : 3x/2 = 12 : 10 : 15$$

**#119** [Explained](#) [Report](#) [Bookmark](#)

The ratio between 2 numbers is 4 : 3 and their L.C.M. is 264. The second number is

null

- **A**  
66
- **B**  
44
- **C**  
55
- **D**  
88

**Correct Answer :A**

## Explanation

Let the numbers be  $4x$  and  $3x$  Their L.C.M. is  $12x$

And it is given as L.C.M. = 264. Therefore,  $12x = 264$

Which gives,  $x = 22$

Therefore, the 2nd number becomes,  $3x = 3 \times 22$

=66

#120 [Explained](#) [Report](#) [Bookmark](#)

Two numbers are respectively 30% and 20% more than a third number. Find the ratio of two numbers.

null

- **A**  
12 : 13
- **B**  
13 : 12
- **C**  
3 : 2
- **D**  
2 : 3

Correct Answer :B

## Explanation

Let the 3rd number be  $x$  As per statement,

$$\text{1st number} = (130/100) * x$$

$$\text{2nd number} = (120/100) * x$$

$$\text{Their ratio} = [(130/100) * x] : [(120/100) * x]$$

$$= 13 : 12$$

### #121 [Explained](#) [Report](#) [Bookmark](#)

A sum of money at simple interest amounts to Rs. 815 in 3 years and to Rs. 854 in 4 years. The sum is

null

- **A**  
650
- **B**  
690
- **C**  
698
- **D**  
700

**Correct Answer :C**

## Explanation

S.I. for 1 year = Rs. (854 – 815) = Rs. 39.

S.I. for 3 years = Rs.(39 x 3) = Rs. 117. Principal = Rs. (815 – 117) = Rs. 698.

### #122 [Explained](#) [Report](#) [Bookmark](#)

A bank offers 5% compound interest calculated on half-yearly basis. A customer deposits Rs. 1600 each on 1st January and 1st July of a year. At the end of the year, the amount he would have gained by way of interest is:

- **A**  
120
- **B**  
121
- **C**  
122
- **D**  
123

**Correct Answer :B**

## Explanation

Amount

$$=[1600 \times (1 + 5/2 \times 100)^2 + 1600 \times (1 + 5/2 \times 100)]$$

$$=[1600 \times 41/40 \times 41/40 + 1600 \times 41/40]$$

$$=[1600 \times 41/40 ((41/40) + 1)]$$

$$=[(1600 \times 41 \times 8) / (40 \times 40)]$$

$$=Rs.3321$$

$$\therefore C.I. = Rs.(3321 - 3200) = Rs.121$$

**#123** [Explained](#) [Report](#) [Bookmark](#)

The difference between simple and compound interests compounded annually on a certain sum of money for 2 years at 4% per annum is Re. 1. The sum (in Rs.) is:



- **A**  
625
- **B**  
630
- **C**  
640
- **D**  
650

**Correct Answer :A**

## Explanation

Let the sum be Rs.x.

Then, C.I. =  $[x(1 + 4/100)^2 - x]$

$$= (676/625x - x)$$

$$= 51/625x$$

$$\text{S.I.} = [(x \times 4 \times 2)/100]$$

$$= 2x/25$$

$$\therefore 51x/625 - 2x/25$$

$$= 1 \Rightarrow x = 625$$

There is 60% increase in an amount in 6 years at simple interest. What will be the compound interest of Rs. 12,000 after 3 years at the same rate?

- **A**  
2160
- **B**  
3120
- **C**  
3972
- **D**  
6240

**Correct Answer :C**

## Explanation

Let  $P = \text{Rs.}100$

Then,  $S.I. = \text{Rs.}100$  and  $T = 6\text{years}$

$$\therefore R = ((100 \times 60) / 100 \times 6) = 10\% \text{p.a.}$$

Now,  $P = \text{Rs.}12000$

$T = 3\text{year}$

and  $R = 10\% \text{p.a.}$

$$\therefore C.I. = \text{Rs.} [12000 \times \{(1 + 10/100)^3 - 1\}]$$

$$= \text{Rs.} (12000 \times 331/1000)$$

$$= 3972$$

## #125 **Explained** **Report** **Bookmark**

What is the difference between the compound interests on Rs. 5000 for 1 1/2 years at 4% per annum compounded yearly and half-yearly?

- **A**  
2.04
- **B**  
3.06
- **C**  
4.80
- **D**  
8.30

**Correct Answer :A**

### Explanation

C.I.when interest compounded yearly

$$=Rs.[5000 \times (1 + 4/100) \times (1 + 12 \times 4/100)]$$

$$=Rs.(5000 \times 26/25 \times 51/50)$$

$$=Rs.5304$$

C.I. when interest in compounded half - yearly

$$=Rs.[5000 \times (1 + 2/100)^3]$$

$$=Rs.(5000 \times 51/50 \times 51/50 \times 51/50)$$

$$=Rs.5306.04$$

$\therefore \text{Difference} = \text{Rs.}(5306.04 - 5304)$

$= \text{Rs.}2.04$

## #126 Explained Report Bookmark

The compound interest on Rs. 30,000 at 7% per annum is Rs. 4347. The period (in years) is:

- **A**  
2
- **B**  
2.3
- **C**  
2.5
- **D**  
2.8

**Correct Answer :A**

## Explanation

Amount  $= \text{Rs.}(30000 + 4347)$

$= \text{Rs.}34347$

Let the time be  $n$  years

Then,  $30000(1 + 7/100)^n = 34347$

$\Rightarrow (107/100)^n$

$$=34347/30000=11449/10000$$

$$=(107100)^2$$

$$\therefore n=2 \text{ years}$$

## #127 Explained Report Bookmark

. What will be the compound interest on a sum of Rs. 25,000 after 3 years at the rate of 12 p.c.p.a.?

- **A**  
Rs. 9000.30
- **B**  
Rs. 9720
- **C**  
Rs. 10123.20
- **D**  
Rs. 10483.20

**Correct Answer :C**

## Explanation

$$\text{Amount} = \text{Rs.} [25000 \times (1 + 12/100)^3]$$

$$= \text{Rs.} (25000 \times 28/25 \times 28/25 \times 28/25)$$

$$= \text{Rs.} 35123.20$$

$$\therefore \text{C.I.} = \text{Rs.} (35123.20 - 25000)$$

$$= \text{Rs.} 10123.20$$

## #128 [Explained](#) [Report](#) [Bookmark](#)

At what rate of compound interest per annum will a sum of Rs. 1200 become Rs. 1348.32 in 2 years?

- **A**  
6%
- **B**  
6.5%
- **C**  
7%
- **D**  
7.5%

Correct Answer :A

## Explanation

Let the rate be R %p.a.

Then,  $1200 \times (1 + \frac{R}{100})^2 = 1348.32$

$$\Rightarrow (1 + \frac{R}{100})^2 = \frac{1348.32}{1200} = 1.1236$$

$$\therefore (1 + \frac{R}{100})^2 = (\frac{106}{100})^2$$

$$\Rightarrow 1 + \frac{R}{100} = \frac{106}{100}$$

$$\Rightarrow R = 6\%$$

## #129 [Explained](#) [Report](#) [Bookmark](#)

The least number of complete years in which a sum of money put out at 20% compound interest will be more than doubled is:

- **A**  
3
- **B**  
4
- **C**  
5
- **D**  
6

Correct Answer :B

## Explanation

$$P(1+20/100)_n > 2P$$

$$\Rightarrow (6/5)_n > 2$$

Now

$$(6/5 \times 6/5 \times 6/5 \times 6/5) > 2$$

So

$$n = 4 \text{ years}$$

**#130** [Explained](#) [Report](#) [Bookmark](#)

Albert invested an amount of Rs. 8000 in a fixed deposit scheme for 2 years at compound interest rate 5 p.c.p.a. How much amount will Albert get on maturity of the fixed deposit?

- **A**  
Rs. 8600

- **B**  
Rs. 8620
- **C**  
Rs. 8820
- **D**  
None of these

**Correct Answer :C**

## Explanation

Amount =Rs.[8000×(1+5100)2]

=Rs.(8000×21/20×21/20)

=Rs.8820

**#131** **Explained** **Report** **Bookmark**

The effective annual rate of interest corresponding to a nominal rate of 6% per annum payable half-yearly is:

- **A**  
6.06%
- **B**  
6.07%
- **C**  
6.08%
- **D**  
6.09%

**Correct Answer :D**



## Explanation

Amount of Rs.100 for 1 year when compounded half - yearly

$$=Rs.[100 \times (1 + 3/100)^2]$$

$$=Rs.106.09$$

∴ Effective rate

$$=(106.09 - 100)\%$$

$$=6.09\%$$

#132 [Explained](#) [Report](#) [Bookmark](#)

If the simple interest on a sum of money for 2 years at 5% per annum is Rs. 50, what is the compound interest on the same at the same rate and for the same time?

- **A**  
51.25
- **B**  
Rs. 52
- **C**  
Rs. 54.25
- **D**  
60

Correct Answer : A

## Explanation

$$\text{Sum} = Rs\{(50 \times 100) / (2 \times 5)\}$$

$$=Rs.500$$

$$\text{Amount} = Rs.[500 \times (1 + 5100)^2]$$

$$=Rs.(500 \times 21/20 \times 21/20)$$

$$=Rs.551.25$$

$$\therefore C.I.$$

$$=Rs.(551.25 - 500)$$

$$=Rs.51.25$$

**#133** [Explained](#) [Report](#) [Bookmark](#)

The difference between simple interest and compound on Rs. 1200 for one year at 10% per annum reckoned half-yearly is:

- **A**  
Rs. 2.50
- **B**  
Rs. 3
- **C**  
Rs. 3.75
- **D**  
Rs. 4

**Correct Answer :B**

## Explanation

S.I.

$$=Rs.\{(1200 \times 10 \times 1)/100\}$$

$$=Rs.120$$

C.I.

$$=Rs.[1200 \times (1 + 5/100)^2 - 1200]$$

$$=Rs.123$$

$$\therefore \text{Difference} = Rs.(123 - 120)$$

$$Rs.3$$

**#134** [Explained](#) [Report](#) [Bookmark](#)

The difference between compound interest and simple interest on an amount of Rs. 15,000 for 2 years is Rs. 96. What is the rate of interest per annum?

- **A**  
8
- **B**  
10
- **C**  
12
- **D**  
9

**Correct Answer :A**

## Explanation

$$[15000 \times (1 + R/100)^2 - 15000] - (15000 \times R \times 2/100) = 96$$

$$\Rightarrow 15000[(1+R/100)^2 - 1] - 2R/100 = 96$$

$$\Rightarrow 15000 \{[(100+R)^2 - 10000] - (200 \times R)\} / 10000 = 96$$

$$\Rightarrow R^2 = (96 \times 23) = 64$$

$$\Rightarrow R = 8$$

$$\therefore \text{Rate} = 8\%$$

### #135 Explained Report Bookmark

The compound interest on a certain sum for 2 years at 10% per annum is Rs. 525. The simple interest on the same sum for double the time at half the rate percent per annum is:

- **A**  
400
- **B**  
500
- **C**  
600
- **D**  
700

**Correct Answer :B**

## Explanation

Let the sum be Rs.P Then,

$$[P(1+10/100)^2 - P] = 525$$

$$\Rightarrow P[(11/10)^2 - 1] = 525$$

$$\Rightarrow P = ((525 \times 100) / 21) = 2500$$

$$\therefore \text{Sum} = \text{Rs. } 2500$$

So,

$$\text{S.I.} = \text{Rs. } ((2500 \times 5 \times 4) / 100)$$

$$= \text{Rs. } 500$$

### #136 [Explained](#) [Report](#) [Bookmark](#)

If the difference between the compound interest and simple interest on a sum of 5% rate of interest per annum for three years is Rs 36.60, then the sum is = ?

null

- **A**  
Rs. 8000
- **B**  
Rs. 8400
- **C**  
Rs. 4400
- **D**  
Rs. 4800

**Correct Answer :D**

## Explanation

In such type of questions to save your valuable time follow the given below method

Rate % = 5%

Effective Rate of CI for 3 years = 15.7625%

Effective Rate of SI for 3 years =  $5 \times 3 = 15\%$

According to the question

$(15.7625 - 15)\%$  of sum = Rs. 36.60

0.7625% of sum = Rs. 36.60

Sum =  $36.60 / 0.7625 \times 100$

=Rs. 4800

**#137** [Explained](#) [Report](#) [Bookmark](#)

If the compound interest on a sum of money for three years at the rate of 5% per annum is rs 252.20, the simple interest on the same sum at the same rate and for the same time is ?

null

- **A**  
220
- **B**  
240
- **C**  
245
- **D**  
250

**Correct Answer :B**

## Explanation

Rate = 5%

Time = 3 years Compound Interest Rs 252.20

Effective rate% of CI for 3 years = 15.7625%

Effective rate% of SI for 3 years =  $5 \times 3 = 15\%$

Required SI =  $(252.20/15.7625) \times 15$

=240

**#138** [Explained](#) [Report](#) [Bookmark](#)

On a certain sum of money the compound interest for 2 years is Rs 282.15 and the simple interest for the same period of time is Rs 270. The rate of interest per annum is = ?

null

- **A**  
6.07%
- **B**  
10%

- **C**  
9%
- **D**  
12.15%

**Correct Answer :C**

## Explanation

CI for 2 years = Rs. 282.15

SI for 2 year = Rs. 270

SI for 1 year = 2702=Rs.135

Difference between CI and SI

= (282.15– 270) = Rs. 12.15

Required rate % = (12.15/135)×100

=9%

**#139** [Explained](#) [Report](#) [Bookmark](#)

**If the rate of interest be 4% per annum for first year, 5% per annum for second year and 6% per annum for third year, then the compound interest of Rs 10000 for three years will be ?**

- **A**  
Rs. 1575.20
- **B**  
Rs. 1600
- **C**  
Rs. 1625.80



- **D**  
Rs. 2000

Correct Answer :A

## Explanation

$$= \text{Rs.} 10000 \left[ \left( 1 + \frac{4}{100} \right) \left( 1 + \frac{5}{100} \right) \left( 1 + \frac{6}{100} \right) \right]$$

$$= \text{Rs.} \left( 10000 \times \frac{26}{25} \times \frac{21}{20} \times \frac{53}{50} \right)$$

$$= \text{Rs.} \frac{57876}{5} = \text{Rs.} 11575.20$$

$$\text{C.I.} = \text{Rs.} (11575.20 - 10000)$$

$$= \text{Rs.} 1575.20$$

#140 **Explained** **Report** **Bookmark**

What will be the compound interest accrued on an amount of Rs.10000 @ 20 p.c.p.a in 2 years if the interest is compounded half - yearly?

- **A**  
Rs. 4400
- **B**  
Rs. 4600
- **C**  
Rs. 4641
- **D**  
Rs. 4680

Correct Answer :C

## Explanation

$P = \text{Rs.}10000, R=20\% \text{ p.a.}$

$=10\% \text{ per half - year}$

$T=2 \text{ years} = 4 \text{ half years Amount}$

$= \text{Rs.}[10000 \times (1+10/100)^4]$

$= \text{Rs.}(10000 \times 11/10 \times 11/10 \times 11/10 \times 11/10)$

$= \text{Rs.}14641$

$\therefore \text{C.I.} = \text{Rs.}(14641 - 10000)$

$= \text{Rs.}4641$

#### #141 [Explained](#) [Report](#) [Bookmark](#)

There are 15 boys and 10 girls in a class. If three students are selected at random, what is the probability that 1 girl and 2 boys are selected?

null

- [A](#)  
1/40
- [B](#)  
1/2
- [C](#)  
21/46
- [D](#)  
7/41

**Correct Answer :C**

## Explanation

Total number of ways of selecting 3 students from 25 students =  $25C_3$

Number of ways of selecting 1 girl and 2 boys = selecting 2 boys from 15 boys and 1 girl from 10 girls

$\Rightarrow$  Number of ways in which this can be done =  $15C_2 \times 10C_1$

$(15C_2 \times 10C_1)$

$\Rightarrow$  Required probability =  $(15C_2 \times 10C_1) / (25C_3)$

$= 21/46$

**#142** [Explained](#) [Report](#) [Bookmark](#)

Two friends Harish and Kalyan appeared for an exam. Let A be the event that Harish is selected and B is the event that Kalyan is selected. The probability of A is  $2/5$  and that of B is  $3/7$ . Find the probability that both of them are selected

null

- **A**  
35/36
- **B**  
5/35
- **C**  
5/12
- **D**  
6/35

**Correct Answer :D**

## Explanation

Given, A be the event that Harish is selected and B is the event that Kalyan is selected.

$$P(A) = 2/5 \quad P(B) = 3/7$$

Let C be the event that both are selected.

$P(C) = P(A) \times P(B)$  as A and B are independent events

$$P(C) = 2/5 \times 3/7 \quad P(C) = 6/35$$

The probability that both of them are selected is 6/35

#143 [Explained](#) [Report](#) [Bookmark](#)

A card is drawn from a well shuffled pack of 52 cards. What is the probability of getting queen or club card?

null

- **A**  
17/52
- **B**  
15/52
- **C**  
4/13
- **D**  
3/13

Correct Answer :C

## Explanation

The probability of getting queen card =  $\frac{4}{52}$  The probability of getting club card =  $\frac{13}{52}$

The club card contains already a queen card, therefore required probability

is,  $\frac{4}{52} + \frac{13}{52} - \frac{1}{52} = \frac{16}{52} = \frac{4}{13}$

**#144** [Explained](#) [Report](#) [Bookmark](#)

**16 persons shake hands with one another in a party. How many shake hands took place?**

null

- **A**  
124
- **B**  
120
- **C**  
165
- **D**  
150

**Correct Answer :B**

## Explanation

Total possible ways =  ${}^{16}C_2$

=  $> 16 \times \frac{15}{2} \times 1$

=120

**#145** [Explained](#) [Report](#) [Bookmark](#)

Srinaya forgot the last digit of an 11 digit land line number. If she randomly dials the final 2 digits after correctly dialing the first nine, then what is the chance of dialing the correct number?

null

- **A**  
1/10
- **B**  
1/100
- **C**  
1/1000
- **D**  
1/11

Correct Answer :B

## Explanation

It is given that last two digits are randomly dialed.

Then each of the digits can be selected out of 10 digits in 10 ways.

Hence required probability

$$=(1/10)^2$$

$$=1/100$$

#146 [Explained](#) [Report](#) [Bookmark](#)

A bag contains 6 pink and 5 yellow balls. One ball is drawn randomly. What is the probability that the ball drawn is Pink?

null

- **A**  
5/11
- **B**  
1/2
- **C**  
3/11
- **D**  
6/11

Correct Answer :D

## Explanation

Probability of 1 Pink Ball =  ${}^6C_1 / {}^{11}C_1$

= 6/11

#147 **Explained** **Report** **Bookmark**

2 dice are thrown simultaneously. What is the probability that the sum of the numbers on the faces is divisible by either 3 or 5?

null

- **A**  
7/36
- **B**  
19/36
- **C**  
9/36
- **D**  
2/7

Correct Answer :B

## Explanation

Let E be the event that the sum of the numbers on the 2 faces is divisible by either 3 or 5. Then

$$E = \{(1,2), (1,4), (1,5), (2,1), (2,3), (2,4), (3,2), (3,3),$$

$$(3,6), (4,1), (4,2), (4,5), (4,6), (5,1), (5,4), (5,5), (6,3),$$

$$(6,4), (6,6)\}$$

$$n(E) = 19$$

$$\text{Hence } P(E) = n(E) / n(s)$$

$$= 19/36$$

**#148** [Explained](#) [Report](#) [Bookmark](#)

Two cards are drawn from pack of 52 cards. What is the probability that both are kings, when first drawn card is replaced?

null

- **A**  
1/169
- **B**  
3/13
- **C**  
3/676
- **D**  
4/676

**Correct Answer :A**



## Explanation

The probability of getting king card =  $4/52$

The first card is replaced so that, it doesn't affect the second drawn card.

Hence, probability of getting 2nd king card =  $4/52$

$\therefore$  Required Probability =  $4/52 \times 4/52 = 1/169$

#149 **Explained** **Report** **Bookmark**

From a pack of 52 cards one card is drawn at random. What is the probability that the card drawn is a six or a diamond?

null

- **A**  
 $17/52$
- **B**  
 $4/13$
- **C**  
 $.9/52$
- **D**  
 $3/13$

**Correct Answer :B**

## Explanation

Here  $n(S) = 52$

There are 13 diamond cards (including one six) and also 3 more sixes are there.

Let E = event of getting a six or a diamond Then  $n(E) = 13 + 3$

$$n(E) = 16$$

Therefore  $P(E) = n(E) / n(S)$

$$= 16 / 52$$

$$P(E) = 4/13$$

**#150** [Explained](#) [Report](#) [Bookmark](#)

An integer is chosen at random from the first fifty integers. What is the probability that the integer chosen is a prime or multiple of 4?

null

- **A**  
14/25
- **B**  
3/5
- **C**  
3/5
- **D**  
27/50

**Correct Answer :D**

## Explanation

There are 15 prime numbers in the first 50 integers i.e. 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43 and 47.

There are 12 integers are multiples of 4 i.e 4, 8, 12, 16,

20, 24, 28, 32, 36, 40, 44 an 48

$\therefore$  required probability=  $15/50 + 12/50 = 27/50$

### #151 **Explained** **Report** **Bookmark**

Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?

null

- **A**  
1/2
- **B**  
2/5
- **C**  
8/5
- **D**  
9/20

**Correct Answer :D**

## Explanation

Here,  $S = \{1, 2, 3, 4, \dots, 19, 20\}$

Let E = event of getting a multiple of 3 or 5

$$= \{3, 6, 9, 12, 15, 18, 5, 10, 20\}$$

$$\therefore P(E) = n(E) / n(S)$$

$$= 9/20$$

**#152** [Explained](#) [Report](#) [Bookmark](#)

Two unbiased coins are tossed. What is the probability of getting at most one head?

null

- **A**  
3/4
- **B**  
1/4
- **C**  
1
- **D**  
3

**Correct Answer :A**

## Explanation

$$S = \{HH, HT, TH, TT\}$$

E = event of getting at most head

$$E = \{HH, HT, TH\}$$

$$P(E) = n(E)/n(S) = 3/4$$

### #153 [Explained](#) [Report](#) [Bookmark](#)

An unbiased die is tossed. Find the probability of getting a multiple of 3.

null

- **A**  
1/4
- **B**  
3/4
- **C**  
2/3
- **D**  
1/3

Correct Answer :D

## Explanation

$$S = \{1, 2, 3, 4, 5, 6\}$$

E = event of getting multiple of 3

$$E = \{3, 6\}$$

$$P(E) = n(E)/n(S) = 2/6 = 1/3$$

### #154 [Explained](#) [Report](#) [Bookmark](#)

In a simultaneous throw of a pair of dice, find the probability of getting a total more than 7.

null

- **A**  
5/12

- **B**  
7/12
- **C**  
11/12
- **D**  
1/12

**Correct Answer :A**

## Explanation

$$n(S) = \{6 * 6\} = 36$$

E = event of getting a total more than 7

$$E = \{(2, 6), (3, 5), (3, 6), (4, 4), (4, 5), (4, 6), (5, 3), (5, 4), (5, 5), (5, 6), (6, 2), (6, 3), (6, 4), (6, 5), (6, 6)\}$$

$$P(E) = n(E)/n(S) = 15/36 = 5/12$$

**#155** [Explained](#) [Report](#) [Bookmark](#)

**.A bag contains 6 white and 4 black balls. Two balls are drawn at random. Find the probability that they are of the same colour.**

null

- **A**  
7/15
- **B**  
2/15
- **C**  
1/15
- **D**  
14/15

Correct Answer :A

## Explanation

$n(S)$  = number of ways of drawing 2 balls out of  $(6 + 4) = 10C_2$

$$n(S) = (10 * 9)/(2 * 1) = 45$$

E = event of getting both balls of the same colour

$n(E)$  = number of ways of drawing (2 balls out of 6) or (2 balls out of 4)

$$n(E) = ({}^6C_2 + {}^4C_2) = ((6 * 5)/(2 * 1)) + ((4 * 3)/(2 * 1)) = 15 + 6 = 21$$

$$P(E) = n(E)/n(S) = 21/45 = 7/15$$

#156 [Explained](#) [Report](#) [Bookmark](#)

Two dice are thrown together. What is the probability that the sum of the numbers on the two faces is divisible by 4 or 6?

null

- **A**  
1/18
- **B**  
4/18
- **C**  
13/18
- **D**  
7/18

Correct Answer :D

## Explanation

$$n(S) = \{6 * 6\} = 36$$

E = event of getting sum of the numbers on the two faces that is divisible by 4 or 6

$$E = \{(1, 3), (1, 5), (2, 2), (2, 4), (2, 6), (3, 1), (3, 3), (3, 5), (4, 2), (4, 4), (5, 1), (5, 3), (6, 2), (6, 6)\}$$

$$P(E) = n(E)/n(S) = 14/36 = 7/18$$

#157 [Explained](#) [Report](#) [Bookmark](#)

.What is the probability of getting a sum 9 from two throws of a dice?

null

- **A**  
1/9
- **B**  
1/8
- **C**  
1/6
- **D**  
1/4

Correct Answer :A

## Explanation

$$n(S) = \{6 * 6\} = 36$$

E = event of getting a sum of 9



$$E = \{(3, 6), (4, 5), (5, 4), (6, 3)\}$$

$$P(E) = n(E)/n(S) = 4/36 = 1/9$$

**#158** [Explained](#) [Report](#) [Bookmark](#)

In a simultaneous throw of two dice, what is the probability of getting a doublet?

null

- **A**  
1/4
- **B**  
1/6
- **C**  
3/7
- **D**  
2/3

**Correct Answer :B**

## Explanation

$$n(S) = (6 * 6) = 36$$

E = event of getting a doublet

$$E = ((1, 1), (2, 2), (3, 3), (4, 4), (5, 5), (6, 6)) = 15 + 6 = 21$$

$$P(E) = n(E)/n(S) = 6/36 = 1/6$$

**#159** [Explained](#) [Report](#) [Bookmark](#)

.Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn bears a number which is a multiple of 3?

null

- **A**  
3/10
- **B**  
2/5
- **C**  
1/2
- **D**  
3/20

Correct Answer :A

## Explanation

$$S = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20\}$$

E = event of getting a multiple of 3

$$E = \{3, 6, 9, 12, 15, 18\}$$

$$P(E) = n(E)/n(S) = 6/20 = 3/10$$

#160 **Explained** **Report** **Bookmark**

in a lottery, there are 10 prizes and 25 blanks. A lottery is drawn at random. What is the probability of getting a prize?

null

- **A**  
2/7
- **B**  
5/7
- **C**  
2/5

- **D**  
1/10

Correct Answer :A

## Explanation

$$n(S) = \{10 + 35\} = 45$$

E = event of getting a prize

$$n(E) = 10$$

$$P(E) = n(E)/n(S) = 10/45 = 2/7$$

#161 **Explained** **Report** **Bookmark**

Find the odd man out in series 3, 5, 7, 12, 17, 19

- **A**  
14
- **B**  
12
- **C**  
19
- **D**  
3

Correct Answer :B

## Explanation

12 is not a prime number, others are prime numbers

also, 12 is an even number.

**#162** [Explained](#) [Report](#) [Bookmark](#)

Find the odd man out in series 41, 43, 47, 53, 61, 71, 73, 81

- **A**  
81
- **B**  
61
- **C**  
71
- **D**  
41

Correct Answer :A

## Explanation

Except 81 others are prime numbers

**#163** [Explained](#) [Report](#) [Bookmark](#)

Find the odd man out in series 1, 5, 14, 30, 50, 55, 91

- **A**  
14
- **B**  
30
- **C**  
55
- **D**  
50

Correct Answer :D

## Explanation

the pattern is  $1^2 = 1$

$$1^2 + 2^2 = 5$$

$$1^2 + 2^2 + 3^2 = 14$$

$$1^2 + 2^2 + 3^2 + 4^2 = 30$$

$$1^2 + 2^2 + 3^2 + 4^2 + 5^2 = 55$$

$$1^2 + 2^2 + 3^2 + 4^2 + 5^2 + 6^2 = 91$$

here in this pattern, number 50 does not follow the pattern

#164 [Explained](#) [Report](#) [Bookmark](#)

Find the odd man out in series 385, 462, 572, 396, 427, 671, 264

- **A**  
671
- **B**  
264
- **C**  
572
- **D**  
427

Correct Answer :D

## Explanation

Pattern is 2nd Digit = 1st Digit + 3rd Digit

i.e) in the number 427,  $2 \neq 4 + 7$

**#165** [Explained](#) [Report](#) [Bookmark](#)

Find the odd man out in series 331, 482, 551, 263, 383, 242, 111

- **A**  
331
- **B**  
383
- **C**  
111
- **D**  
242

Correct Answer :B

## Explanation

Pattern is 2nd digit = 1st digit \* 3rd digit

i.e) In the number 383,  $8 \neq 3 * 3$

**#166** [Explained](#) [Report](#) [Bookmark](#)

Find the odd man out in series 2, 5, 10, 17, 26, 37, 50, 64

- **A**  
64
- **B**  
50
- **C**  
17

- **D**  
10

Correct Answer :A

## Explanation

Pattern is  $x^2+1$ , where  $x = 1, 2, 3, 4, 5, 6, 7, \dots$

number 64 does not follow the pattern( $8^2 + 1 = 65$ )

#167 [Explained](#) [Report](#) [Bookmark](#)

Find the odd man out in series 253, 136, 352, 460, 324, 631, 244

- **A**  
136
- **B**  
244
- **C**  
631
- **D**  
324

Correct Answer :D

## Explanation

sum of digits of the number is not equal to 10

$3 + 2 + 4 \neq 10$ , sum of digits of remaining numbers are equal to 10.

#168 [Explained](#) [Report](#) [Bookmark](#)

Find the odd man out in series .22, 33, 66, 99, 121, 279, 594

- **A**  
33
- **B**  
279
- **C**  
121
- **D**  
594

Correct Answer :B

## Explanation

every number except 279 is a multiple of 11

#169 [Explained](#) [Report](#) [Bookmark](#)

Find the odd man out in series 8, 13, 21, 32, 47, 63, 83

null

- **A**  
83
- **B**  
21
- **C**  
47
- **D**  
8

Correct Answer :C

## Explanation



go on adding 5,  $(5 + 3 = 8)$ ,  $(8 + 3 = 11)$ ,  $(11 + 3 = 14)$ ,  $(14 + 3 = 17)$ ,  $(17 + 3 = 20)$ ,.....

$(32 + 14 = 46)$  i.e) number 47 does not follow the pattern.

**#170** [Explained](#) [Report](#) [Bookmark](#)

Find the odd man out in series 6, 13, 18, 25, 30, 37, 40

null

- **A**  
18
- **B**  
40
- **C**  
6
- **D**  
37

**Correct Answer :B**

## Explanation

The difference between two successive terms from the beginning are 7, 5, 7, 5, 7, 5.

but  $40 - 37 = 3$ , so 40 does not follow the pattern.

**#171** [Explained](#) [Report](#) [Bookmark](#)

Find the value of 60P3

- **A**  
214320
- **B**  
215320
- **C**  
205420
- **D**  
205320

Correct Answer :D

## Explanation

$${}_{60}P_3 = \frac{60!}{(60 - 3)!} = \frac{60!}{57!} = \frac{(60 * 59 * 58 * 57!)}{57!} = 60 * 59 * 58 = 205320$$

#172 [Explained](#) [Report](#) [Bookmark](#)

Find the value of

# ${}_{10}C_3$

- **A**  
120
- **B**  
60
- **C**  
150
- **D**  
160

Correct Answer :A

## Explanation

$${}_{10}C_3 = \frac{(10 * 9 * 8)}{(3 * 2 * 1)} = 120$$

### #173 [Explained](#) [Report](#) [Bookmark](#)

How many words can be formed by using all letters of the word 'BIHAR'?

null

- **A**  
40
- **B**  
80
- **C**  
160
- **D**  
120

Correct Answer :D

## Explanation

BIHAR contains 5 different letters

Required number of words =  ${}^5P_5 = 5! = 5 * 4 * 3 * 2 * 1 = 120$

### #174 [Explained](#) [Report](#) [Bookmark](#)

How many letters can be formed from the letters of the word 'DIRECTOR' so that the vowels are always together?

null

- **A**  
2160
- **B**  
2100
- **C**  
2200

- **D**  
2060

Correct Answer :A

## Explanation

In the given word, treat the vowels IEO as one letter

thus, we have DRCTR (IEO)

this word has 6 letters of which R occurs 2 times and others are different

number of ways of arranging these letters =  $6!/2! = 360$

now 3 vowels can be arranged among themselves in  $3! = 6$  ways

required number of ways =  $(360 * 6) = 2160$

#175 [Explained](#) [Report](#) [Bookmark](#)

In how many ways, a committee of 5 members can be selected from 6 men and 5 ladies, consisting of 3 men and 2 ladies?

null

- **A**  
100
- **B**  
150
- **C**  
250
- **D**  
200

Correct Answer :D

## Explanation

3 men out of 6 and 2 ladies out of 5 are to be chosen

Required number of words =  ${}^6C_3 \cdot {}^5C_2 = \frac{(6 \cdot 5 \cdot 4)}{(3 \cdot 2 \cdot 1)} \cdot \frac{(5 \cdot 4)}{(2 \cdot 1)} = 200$

#176 [Explained](#) [Report](#) [Bookmark](#)

In how many ways can a group of 5 men and 2 women be made out of a total of 7 men and 3 women?

null

- [A](#)  
63
- [B](#)  
90
- [C](#)  
126
- [D](#)  
45

Correct Answer :A

## Explanation

Required number of ways =  ${}^7C_5 \cdot {}^3C_2 = {}^7C_2 \cdot {}^3C_1 = \frac{(7 \cdot 6)}{(2 \cdot 1)} \cdot 3 = 63$

#177 [Explained](#) [Report](#) [Bookmark](#)

In how many ways a committee, consisting of 5 men and 2 women can be formed from 8 men and 10 women?

null

- **A**  
11660
- **B**  
11760
- **C**  
5040
- **D**  
5540

Correct Answer :B

## Explanation

required number of ways =  ${}^8C_5 \cdot {}^{10}C_2 = {}^8C_3 \cdot {}^{10}C_4$

$$= ((8 * 7 * 6) / (3 * 2 * 1)) * ((10 * 9 * 8 * 7) / (4 * 3 * 2 * 1)) = 11760$$

#178 [Explained](#) [Report](#) [Bookmark](#)

From a group of 7 men and 6 women, five persons are to be selected to form a committee so that at least 3 men are there on the committee. In how many ways can it be done?

null

- **A**  
564
- **B**  
645
- **C**  
756
- **D**  
865

Correct Answer :C

## Explanation

We may have 3 men and 2 women or 4 men and 1 women or 5 men only

Required number of words =  $({}^7C_3 * {}^6C_2) + ({}^7C_4 * {}^6C_1) + {}^7C_5$

$$= (((7 * 6 * 5)/(3 * 2 * 1)) * ((6 * 5)/(2 * 1))) + (((7 * 6 * 5)/(3 * 2 * 1)) * 6) + ((7 * 6)/(2 * 1))$$

$$= 525 + 210 + 21 = 756$$

#179 [Explained](#) [Report](#) [Bookmark](#)

.In a group of 6 boys and 4 girls, four children are to be selected. In how many different ways can they be selected such that at least one boy should be there?

- **A**  
209
- **B**  
205
- **C**  
194
- **D**  
159

Correct Answer :A

## Explanation

$$\begin{aligned}
 & ({}^6C_1 \times {}^4C_3) + ({}^6C_2 \times {}^4C_2) + ({}^6C_3 \times {}^4C_1) + {}^6C_4 \\
 & \left( \frac{6 \times 4 \times 3 \times 2}{3 \times 2} \right) + \left( \frac{6 \times 5}{2} \times \frac{4 \times 3}{2} \right) + \left( \frac{6 \times 5 \times 4}{3 \times 2} \times 1 \right) + \frac{6 \times 5 \times 4}{3 \times 2 \times 1} \\
 & 24 + 90 + 80 + 15 \\
 & = 209
 \end{aligned}$$

### #180 Explained Report Bookmark

A box contains 2 white balls, 3 black balls and 4 red balls. In how many ways can 3 balls be drawn from the box, if at least one black ball is to be included in the draw?

null

- **A**  
64
- **B**  
32
- **C**  
48
- **D**  
96

Correct Answer :A

## Explanation

We may have 1 black and 2 non-black or 2 black and 1 non-black or 3 black

required number of ways =  $({}^3C_1 \times {}^6C_2) + ({}^3C_2 \times {}^6C_1) + {}^3C_3$

$$= (3 \times ((6 \times 5)/(2 \times 1))) + (((3 \times 2)/(2 \times 1)) \times 6) + 1$$



$$= 45 + 18 + 1 = 64$$

### #181 [Explained](#) [Report](#) [Bookmark](#)

A train running at the speed of 60 km/hr crosses a pole in 9 seconds. What is the length of the train?

null

- **A**  
120 metres
- **B**  
180 meters
- **C**  
324 meters
- **D**  
150 meters

Correct Answer :D

## Explanation

Length of the train = (Speed x Time) =  $50/3 \times 9$  m = 150 m.

### #182 [Explained](#) [Report](#) [Bookmark](#)

600m long train is running at 73 Kmph. How much time Train will take to cross an electric pole?

null

- **A**  
29.58 sec
- **B**  
28.58sec

- **C**  
29 sec
- **D**  
28sec

**Correct Answer :A**

## Explanation

Formula Used: Time = ( Distance / Speed)

As all the option given in sec., so convert the train speed (Kmph) in to mps multiply by 5/18

$$\text{speed (mps)} = 73 * 5/18$$

$$\text{Time} = 600 / (73 * 5/18)$$

$$= (600 * 18) / (73 * 5) \text{ sec}$$

$$= (10800 / 365)$$

$$\text{Time take by Train} = 29.58\text{Sec}$$

**#183** **Explained** **Report** **Bookmark**

**A 120 m long train is running at 72 Kmph. How much time will it take to cross a man standing on the platform?**

null

- **A**  
6 sec
- **B**  
2.5 sec

- **C**  
5 sec
- **D**  
12 sec

**Correct Answer :A**

## Explanation

Formula Used: Time = ( Distance / Speed)

As all the option given in sec., so convert the train speed (Kmph) in to mps multiply by 5/18

$$\text{speed (mps)} = 72 * 5/18 = 20 \text{ mps}$$

$$\text{Time} = (120 / 20) \text{ sec} = 6 \text{ sec}$$

Time take by Train = 6 Sec.

**#184** [Explained](#) [Report](#) [Bookmark](#)

**A train running at speed of 126 Kmph. What will be the length of train if it cross a tree in 5 sec.**

null

- **A**  
190 meters
- **B**  
180 meters
- **C**  
143 meters
- **D**  
175 meters

Correct Answer :D

## Explanation

Formula Used: Distance = (Speed \* Time)

convert the train speed (Kmph) in to mps multiply by 5/18

speed (mps) =  $126 * 5/18 = 35$  mps

length = (  $35 * 5$  ) meter

= 175 meter

#185 [Explained](#) [Report](#) [Bookmark](#)

320m long train is running at 72 Kmph. how much time it will take to cross a platform of 180m long?

null

- **A**  
20sec
- **B**  
30sec
- **C**  
25sec
- **D**  
27sec

Correct Answer :C

## Explanation

otal Length = Platform Length + Train Length

So Total Length = 500m

convert the train speed (Kmph) in to mps multiply by 5/18

$$\text{speed (mps)} = 72 * 5/18 = 20\text{mps}$$

Formula Used: Time = Distance/Speed

$$\text{Time} = (500 / 20) \text{ sec}$$

$$= 25 \text{ sec}$$

**#186** [Explained](#) [Report](#) [Bookmark](#)

Two trains 400m and 300m long run at the speeds of 50 kmph and 40kmph respectively in opposite Directions on parallel tracks. The time taken to cross each other?

null

- **A**  
20sec
- **B**  
28sec
- **C**  
25sec
- **D**  
24sec

**Correct Answer :B**

**Explanation**

Trains are running in opposite Direction:

So need to find Length of two Trains =  $300\text{m} + 400\text{m} = 700\text{m}$

and Total Speed =  $40\text{ Kmph} + 50\text{ Kmph}$  (Opposite Direction)

=  $90\text{ Kmph}$

so speed (m/sec) =  $90 * \frac{5}{18}\text{ m/sec} = 25\text{ m/sec}$

Formula Used: Time = Distance/Speed

Time =  $700 / 25\text{ sec}$

Time =  $28\text{ Sec}$

#187 [Explained](#) [Report](#) [Bookmark](#)

A train overtakes two persons who are walking in the same direction in which the train is going, at the rate of  $2\text{ kmph}$  and  $4\text{ kmph}$  and passes them completely in  $19$  and  $20$  seconds respectively. The length of the train is:

null

- **A**  
 $245\text{m}$
- **B**  
 $211.1\text{m}$
- **C**  
 $210\text{m}$

- **D**  
213m

**Correct Answer :B**

## Explanation

Convert the persons Speed in m/sec

$$2 \text{ kmph} = (2 \times 5/18) \text{ m/sec} = 5/9 \text{ m/sec.}$$

$$4 \text{ kmph} = (4 \times 5/18 \text{ m/sec} = 10/9 \text{ m/sec.}$$

Let the length of the train be x meters and its speed by y m/sec.

Relative speed in respect to both person  $(y - 5/9)$  and  $(y - 10/9)$

Formula Used: Time = Distance / speed

$$\text{so } x / (y - 5/9) = 19 \text{ ---- (1)}$$

$$\text{and } x / (y - 10/9) = 20 \text{ ---- (2)}$$

$$9x = 19 (9y - 5) \text{ ----- (1)}$$

$$9x = 20 (9y - 10) \text{ -----(2)}$$

find the value of x and y

$$19(9y - 5) = 20(9y - 10)$$

$$171y - 95 = 180y - 200 \Rightarrow 9y = 105 \Rightarrow y = 105/9 = 35/3$$

Now find the value of x by above any equations

$$9x = 171 \cdot 35/3 - 95 = 57 \cdot 35 - 95$$

$$9x = 1900 \Rightarrow x = 211.1 \text{ meter}$$

#188 [Explained](#) [Report](#) [Bookmark](#)

Two stations A and B are 110 km apart on a straight line. One train starts from A at 7 a.m. and travels towards B at 20 kmph. Another train starts from B at 8 a.m. and travels towards A at a speed of 25 kmph. At what time will they meet?

null

- **A**  
10 am
- **B**  
11 am
- **C**  
10 pm
- **D**  
11 pm

**Correct Answer :A**

## Explanation

Let they meet x hours after 7 a.m.



Distance covered by A in x hours =  $20x$  km.

Distance covered by B in  $(x - 1)$  hours =  $25(x - 1)$  km.

So Total Distance

$$\Rightarrow 20x + 25(x - 1) = 110$$

$$\Rightarrow 45x - 25 = 110 \Rightarrow 45x = 135$$

$$\Rightarrow x = 3.$$

As They meet x hrs after 7 a.m. so they meet at 10 a.m.

**#189** [Explained](#) [Report](#) [Bookmark](#)

**A train overtakes two persons walking along a railway track. The first one walks at 4.5 km/hr. The other one walks at 5.4 km/hr. The train needs 8.4 and 8.5 seconds respectively to overtake them. If both the persons are walking in the same direction as the train? So What is the speed of the train ?**

null

- **A**  
96 km/hr
- **B**  
51 km/hr
- **C**  
81 km/hr

- **D**  
76 km/hr

**Correct Answer :C**

## Explanation

Convert the Speed in m/sec

so 4.5 km/hr =  $(4.5 \times 5/18)$  m/sec =  $5/4$  m/sec = 1.25 m/sec,

and 5.4 km/hr =  $(5.4 \times 5/18)$  m/sec =  $3/2$  m/sec = 1.5 m/sec.

Here assume the speed of the train as x m/sec.

so relative will be  $(x - 1.25)$  and  $(x - 1.5)$

$$(x - 1.25) \times 8.4 = (x - 1.5) \times 8.5$$

$$\Rightarrow 8.4x - 10.5 = 8.5x - 12.75$$

$$\Rightarrow 0.1x = 2.25$$

$$\Rightarrow x = 22.5 \text{ m/s}$$

As options are given in km/hr so convert the speed mps to kmph

So Speed of the train =  $( 22.5 \times 18/5 )$  km/hr = 81 km/hr.

#190 **Explained** **Report** **Bookmark**

Two trains are running at 40 km/hr and 20 km/hr respectively in the same direction. Fast train completely passes a man sitting in the slower train in 5 seconds. What is the length of the fast train?

null

- **A**  
27m
- **B**  
33m
- **C**  
 $27 \frac{7}{9}$ m
- **D**  
 $23 \frac{4}{9}$ m

**Correct Answer :C**

## Explanation

As train are running in same direction

so Relative speed =  $(40 - 20)$  km/hr = 20 km/hr

=  $( 20 \times 5/18 )$  m/sec =  $50/9$  m/sec.

Formula Used: Distance = Speed \* Time

Now Length of Faster Train =  $( 50/9 \times 5 )$  m =  $250/9$  m

$$= 27 \frac{7}{9} \text{ m}$$

### #191 [Explained](#) [Report](#) [Bookmark](#)

Two, trains, one from Howrah to Patna and the other from Patna to Howrah, start simultaneously. After they meet, the trains reach their destinations after 9 hours and 16 hours respectively. The ratio of their speeds is:

null

- [A](#)  
2:3
- [B](#)  
6:7
- [C](#)  
4:3
- [D](#)  
9:16

Correct Answer :C

## Explanation

Let's name both trains as A and B. Then,

Formula Used:  $\frac{1}{(A's \text{ speed})} : \frac{1}{(B's \text{ speed})} = \frac{1}{b} : \frac{1}{a}$

$\frac{1}{(A's \text{ speed})} : \frac{1}{(B's \text{ speed})} = \frac{1}{16} : \frac{1}{9} = 4 : 3.$

### #192 [Explained](#) [Report](#) [Bookmark](#)

A train 125 m long passes a man, running at 5 km/hr in the same direction in which the train is going, in 10 seconds. The speed of the train is:

null

- **A**  
150 km/hr
- **B**  
50 km/hr
- **C**  
75 km/hr
- **D**  
55 km/hr

**Correct Answer :B**

## Explanation

Let's assume the speed of the train  $x$  km/hr.

so relative speed =  $(x - 5)$  km/hr. so speed (mps) =  $(x-5) * 5/18$

Formula Used: Distance = Speed \* Time

$$125 = (x-5) * 5/18 * 10 \Rightarrow 125 = (50x - 250)/18$$

$$\Rightarrow 125 * 18 = 50x - 250$$

$$50x = 2500 \Rightarrow x = 50$$

$$x = 50 \text{ km/hr.}$$

**#193** [Explained](#) [Report](#) [Bookmark](#)

**A 240m long train is running at 90kmph. If it crossed the platform in 30sec, then find the length of the platform?**

null

- **A**  
500m
- **B**  
490m
- **C**  
510m
- **D**  
550m

**Correct Answer :C**

## Explanation

Train speed in (m/sec) =  $90 * \frac{5}{18} = 25$  m/sec

total Length =  $25 * 30$  m = 750 m

So Length of Platform= (Total Length - Length of the Train)

= (750 - 240)

= 510m

**#194** [Explained](#) [Report](#) [Bookmark](#)

Two trains running in opposite directions at 40kmph and 50kmph, cross each other in 30sec. The length of one train is 250m, then find the length of other one?

null

- **A**  
520m

- **B**  
510m
- **C**  
500m
- **D**  
490m

**Correct Answer :C**

## Explanation

Relative Speed = ( 40 + 50 ) kmph = 90 kmph

= (90 \* 5/18) m/sec = 25 m/sec

Distance covered = 25 \* 30 m = 750 m

Length of second train = total length - Length of first train

= (750 - 250)m = 500m

**#195** [Explained](#) [Report](#) [Bookmark](#)

**A train crosses a platform of 120m in 15sec, same train crosses another platform of length 180m in 18sec. then find the length of the train?**

null

- **A**  
180m
- **B**  
175m
- **C**  
185m

- **D**  
170m

**Correct Answer :A**

## Explanation

Let's assume Length of the train = x meters

$$(X + 120)/15 = (X + 180)/18$$

$$6X + 720 = 5X + 900$$

$$X = 180\text{m}$$

**#196** [Explained](#) [Report](#) [Bookmark](#)

A train travelling at a speed of 75 mph enters a tunnel  $3\frac{1}{2}$  miles long. The train is  $\frac{1}{4}$  mile long. How long does it take for the train to pass through the tunnel from the moment the front enters to the moment the rear emerges?

null

- **A**  
2.5 min
- **B**  
3 min
- **C**  
3.2 min
- **D**  
3.5 min

**Correct Answer :B**



## Explanation

Total distance covered by train =  $(7/2 + 1/4)$  miles =  $15/4$  miles.

Therefore Time taken =  $(15/4) / 75$  hrs =  $1/20$  hrs

=  $(1/20 \times 60)$  min. = 3 min.

**#197** [Explained](#) [Report](#) [Bookmark](#)

Two trains each 100 m long, moving in opposite directions, cross each other in 8 seconds. If one is moving twice as fast the other, then the speed of the faster train is

null

- **A**  
30 km /hr
- **B**  
60 km /hr
- **C**  
30 km /hr
- **D**  
45 km /hr

**Correct Answer :B**

## Explanation

speed of the faster train =  $2x$  m/sec.

Relative speed of train =  $(x + 2x)$  m/sec =  $3x$  m/sec.

Total distance =  $(100 + 100)$ m = 200m

$$3x = 200/8$$

$$\Rightarrow 24x = 200 \Rightarrow x = 25/3$$

So speed of the faster train =  $2 * 25/3$  m/sec

$$= 50/3 \text{ m/sec}$$

$$= 50/3 * 18/5 = 60 \text{ km/hr.}$$

**#198** [Explained](#) [Report](#) [Bookmark](#)

A train passes a station platform in 36 seconds and a man standing on the platform in 20 seconds. If the speed of the train is 54 km/hr, what is the length of the platform?

null

- **A**  
120 m
- **B**  
150 m
- **C**  
240 m
- **D**  
245 m

**Correct Answer :C**

## Explanation

Speed =  $(54 * 5 / 18)$  m/sec = 15 m/sec.

Length of the train =  $(15 \times 20)\text{m} = 300 \text{ m}$ .

Let the length of the platform be  $x$  metres.

$$\text{So } (x + 300)/36 = 15$$

$$x + 300 = 540$$

$$\Rightarrow x = 240 \text{ m}.$$

**#199** [Explained](#) [Report](#) [Bookmark](#)

A train 360 m long is running at a speed of 45 km/hr. In what time will it pass a bridge 140 m long?

- **A**  
40 sec
- **B**  
42 sec
- **C**  
45 sec
- **D**  
48 sec

**Correct Answer :A**

## Explanation

$$45\text{km}=45\times 1000=45000\text{m}$$

$$1\text{ hour}=60\times 60=3600\text{seconds}$$

$$\text{Speed of the train is } 45000\text{m}/3600\text{sec} = 12.5\text{m/sec}$$

The distance that train should travel in order to pass the bridge is the length of the train plus the bridge length  $360+140=500\text{meters}$

$$\text{So } 500/12.5 = 40\text{ seconds}$$

In 40 seconds the train will pass the bridge.

**#200** [Explained](#) [Report](#) [Bookmark](#)

Two trains A and B start simultaneously in the opposite direction from two points A and B arrive at their destinations 9 and 4 hours respectively after their meeting each other. At what rate does the second train B travel if the first train travels at 80 km per hour.

null

- **A**  
110 km/hr
- **B**  
100 km/hr
- **C**  
120 km/hr
- **D**  
90 km/hr

**Correct Answer :C**

## Explanation

$$(\text{A's speed}) : (\text{B's speed}) = 9:4.$$

=> B's speed =  $80 \times \frac{9}{4}$ .

=> 120km/hr.

## #201 Explained Report Bookmark

A cistern can be filled by a tap in 4 hours while it can be emptied by another tap in 9 hours. If both taps are opened simultaneously, then after how much time will the cistern get filled ?

null

- **A**  
5 hr
- **B**  
4.5 hr
- **C**  
7.2 hr
- **D**  
6.5 hr

**Correct Answer :C**

## Explanation

Time taken by tap A to fill the cistern=4 hrs

so work done by tap A in 1 hour =  $\frac{1}{4}$ th

Time taken by tap B to empty the full cistern = 9 hours

so work done by tap B in 1 hour =  $\frac{1}{9}$ th

=> Work done by (A + B) in 1 hour =  $(\frac{1}{4} - \frac{1}{9}) = \frac{5}{36}$

Therefore, the tank will fill the cistern =  $\frac{36}{5}$  hours = 7.2 hours.

**#202** [Explained](#) [Report](#) [Bookmark](#)

A pump can fill a tank with water in 2 hours. Because of a leak, it took  $2\frac{1}{3}$  hours to fill the tank. The leak can drain all the water of the tank in.

- **A**  
7 hr
- **B**  
8 hr
- **C**  
12 hr
- **D**  
14 hr

**Correct Answer :D**

## Explanation

Work Done by the leak in 1 hrs =  $(\frac{1}{2} - \frac{3}{7}) = \frac{1}{14}$

so leak will empty the tank in 14 hrs

**#203** [Explained](#) [Report](#) [Bookmark](#)

Two pipes A and B can fill a tank in 9 hours and 3 hours respectively. If they are opened on alternate hours and if pipe A is opened first, in how many hours will the tank be full?

null

- **A**  
4 hr
- **B**  
5 hr
- **C**  
2 hr
- **D**  
6 hr

**Correct Answer :B**

## Explanation

Tank part filled by pipe A in 1 hour  $=1/9$

Tank part filled by pipe B in 1 hour  $=1/3$

Given Pipe A and B are opened alternatively.

So Part filled in every 2 hours  $=(1/9+1/3)=4/9$

Tank Part will be filled in 4 hour  $=2*4/9=8/9$

Remaining part  $= (1-8/9)=1/9$

So next is A turn.

So Pipe A will fill remaining  $\frac{1}{9}$  part in next 1 hour.

Total Time = (4 hrs + 1 hrs) = 5 hrs.

#204 [Explained](#) [Report](#) [Bookmark](#)

A pump takes 8 hours to fill an overhead tank, but due to an open tap in the kitchen, the time taken is 10 hours. In how much time would the kitchen tap empty a full overhead tank?

- **A**  
20 hr
- **B**  
40 hr
- **C**  
30 hr
- **D**  
60 hr

Correct Answer :B

## Explanation

work done in one hour

$$\frac{1}{A} - \frac{1}{B} = \frac{1}{10}$$

$$\frac{1}{8} - \frac{1}{x} = \frac{1}{10}$$

$$\frac{1}{8} - \frac{1}{10} = \frac{1}{x}$$



Therefore  $x = 40$

**#205** **Explained** **Report** **Bookmark**

Pipe A can fill a cistern in 6 hours less than Pipe B. Both the pipes together can fill the cistern in 4 hours. How much time would A take to fill the cistern all by itself?

null

- **A**  
1 hr
- **B**  
2 hr
- **C**  
6 hr
- **D**  
8 hr

**Correct Answer :C**

## Explanation

Let's assume time required by Pipe A to fill the cistern =  $X$  hours

So Time required by Pipe B to fill the cistern =  $(X + 6)$  hours

? Both Pipes (A+B) can fill cistern in 1 hour =  $[1/X + 1/(X + 6)]$

Given Both pipe fill the cistern in 4 hours

$$\Rightarrow [1/X + 1/(X + 6)] = 1/4 \Rightarrow [(X+6) + X]/(X+6)*x = 1/4$$

$$4X + 24 + 4X = X^2 + 6x$$

$$X^2 - 2X - 24 = 0$$

$$(X-6)(X+4) = 0$$

=> A can fill cistern in 6 hours.

## #206 [Explained](#) [Report](#) [Bookmark](#)

12 buckets of water fill a tank when the capacity of each tank is 13.5 liters. How many buckets will be needed to fill the same tank, if the capacity of each bucket is 9 liters?

null

- **A**  
8
- **B**  
15
- **C**  
16
- **D**  
18

Correct Answer :D

## Explanation

Capacity of the tank =  $(12 \times 13.5)$  liters = 162 liters.

Capacity of each bucket = 9 liters

Number of buckets needed =  $162/9 = 18$ .

## #207 [Explained](#) [Report](#) [Bookmark](#)

One pipe can fill a tank three times as fast as another pipe. If together the two pipes can fill the tank in 36 min, then the slower alone will be able to fill the tank in:

null

- **A**  
81 min
- **B**  
108 min
- **C**  
144 min
- **D**  
192 min

**Correct Answer :C**

## Explanation

Lets assume time required by slower pipe alone to fill the tank = x minutes.

Then, faster pipe will fill it in  $x/3$  minutes.

$$\Rightarrow \frac{1}{x} + \frac{3}{x} = \frac{1}{36}$$

$$\Rightarrow \frac{4}{x} = \frac{1}{36} \Rightarrow x = 144 \text{ min.}$$

**#208** **Explained** **Report** **Bookmark**

A tap supplies 8 litres of water per minute into a cistern. A leak at the bottom of the cistern can empty the cistern in 10 hours. A full tank with the tap open is emptied by the leak in 15 hours. What is the capacity of the tank?

null

- **A**  
15000 litres
- **B**  
14400 litres
- **C**  
12500 litres

- **D**  
13400 litres

**Correct Answer :B**

## Explanation

Tank can be emptied by leak in 1 hour =  $1/10$

or

Time required to emptied  $1/10$  part of tank = 1 hour

Given full tank can be emptied by leak = 15 hours

or time need to emptied  $1/15$  part of tank by leak = 1 hours

so  $(1/10 - 1/15)$  part can be filled by tap = 1 hours

=>  $1/30$  part can be filled by tap = 1 hours

or

Time needed to fill the cistern by tap = 30 hours = 1800 minutes

so Capacity of cistern =  $8 * 1800 = 14400$  liters

**#209** **Explained** **Report** **Bookmark**

Two pipes A and B can fill a cistern in 20 and 30 minutes respectively, and a third pipe C can empty it in 40 minutes. How long will it take to fill the cistern if all the three are opened at the same time?

null

- **A**  
19  $\frac{1}{7}$  min
- **B**  
15  $\frac{1}{7}$  min
- **C**  
17  $\frac{1}{7}$  min
- **D**  
 $\frac{7}{17}$  min

Correct Answer :C

## Explanation

Cistern part filled by pipe A in 1 min =  $\frac{1}{20}$

and by pipe B in 1 min =  $\frac{1}{30}$

Pipe C empty cistern in 1 min =  $\frac{1}{40}$  part.

When all pipes are open Cistern part will be filled =  $(\frac{1}{20} + \frac{1}{30} - \frac{1}{40}) = \frac{7}{120}$

=> Time required to fill the cistern =  $\frac{120}{7} = 17 \frac{1}{7}$  mi

**#210** [Explained](#) [Report](#) [Bookmark](#)

Bucket A has thrice the capacity as bucket B. It takes 80 turns for bucket A to fill the empty drum. How many turns it will take for both the buckets A and B, having each turn together to fill the empty drum?

null

- **A**  
80
- **B**  
30

- **C**  
60
- **D**  
45

**Correct Answer :C**

## Explanation

Lets Assume capacity of bucket A = x

so capacity of bucket B = x/3

Given that it takes 80 turns for bucket A to fill the empty drum.

So capacity of the drum = 80x

Number of turns required if both A and B having each turn together =  $80x / (x + x/3) = 240x / (3x + x) = 60$

**#211** [Explained](#) [Report](#) [Bookmark](#)

**A clock is started at noon. By 10 minutes past 5, the hour hand has turned through**

- **A**  
 $145^\circ$

- **B**  
150°
- **C**  
155°
- **D**  
160°

**Correct Answer :C**

## Explanation

Angle traced by hour hand in 12 hrs. = 360°

Angle traced by hour hand in 5 hrs 10 min.

$$\Rightarrow 31/6 \text{ hrs} = (360/12 * 31/6)^\circ = 155^\circ$$

**#212** [Explained](#) [Report](#) [Bookmark](#)

**Fifty minutes ago it was four times as many minutes past three o'clock. How many minutes is it to six o'clock..?**

null

- **A**  
10 min
- **B**  
26 min
- **C**  
20 min

- **D**  
30 min

**Correct Answer :B**

## Explanation

There are 180 minutes between 3 o'clock and 6 o'clock.

Call  $x$  the number of minutes to 6 o'clock.

Then it is  $180 - x$  minutes past 3 o'clock and 50 minutes ago it was  $130 - x$  minutes past 3 o'clock.

Using the 4 times as many minutes past three o'clock but we can form the equation

$130 - x = 4x$  and solve it

$130 = 5x$

$x = 26$  so yes it is 26 minutes

**#213** **Explained** **Report** **Bookmark**

**How many times in a day, are the hands of a clock in straight line but opposite in direction?**

null

- **A**  
20
- **B**  
22



- **C**  
24
- **D**  
48

**Correct Answer :B**

## Explanation

The hands of a clock point in opposite directions (in the same straight line) 11 times in every 12 hours. (Because between 5 and 7 they point in opposite directions at 6 o'clock only).

So, in a day, the hands point in the opposite directions 22 times.

**#214** **Explained** **Report** **Bookmark**

**A clock is set right at 5am the clock loses 16min in 24 hours. What will be the right time when the clock indicates 10am? On the 4th day?**

null

- **A**  
10:30 pm
- **B**  
10:45 pm
- **C**  
11:15 pm
- **D**  
11 pm

**Correct Answer :D**

## Explanation

Total Time from 5 am. On a day to 10pm. on 4th day = 89 hours.

=> 23 hrs 44 min. of this clock = 24 hours of correct clock

=> 365/15 hrs of this clock = 24 hours of correct clock

=> 1 hrs of this clock =  $(24 * 15/356)$  hrs. of correct clock.

so, 89 hrs of this clock =  $(24 * 15/356 * 89)$  hrs of correct clock = 90 hrs of correct clock.

So, correct time is 11pm.

**#215** [Explained](#) [Report](#) [Bookmark](#)

**An accurate clock shows 8 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?**

null

- **A**  
144°
- **B**  
150°
- **C**  
168°
- **D**  
180°

**Correct Answer :D**

## Explanation

Angle traced by the hour hand in 6 hours =  $(360/12 * 6)$ ° = 180°.

## #216 [Explained](#) [Report](#) [Bookmark](#)

If a clock shows 4'O clock in the noon. Through how many degrees will the hour hand rotate when the clock shows 12'O clock in the night?

null

- **A**  
150°
- **B**  
170°
- **C**  
240°
- **D**  
130°

Correct Answer :C

## Explanation

4 o'clock noon to 12 o'clock = 8 hrs.

Angle traced by hour hand in 12 hrs. =  $360^\circ$

so, Angle traced hour hand in 8 hours =  $(360^\circ/12 * 8) = (120 * 2) = 240^\circ$

## #217 [Explained](#) [Report](#) [Bookmark](#)

How much does a watch lose per day, if its hands coincide every 64 minutes?

null

- **A**  
32  $\frac{8}{11}$  min.
- **B**  
36  $\frac{5}{11}$  min.
- **C**  
90 min.
- **D**  
96 min.

**Correct Answer :A**

## Explanation

55 min. spaces are covered in 60 min.

60 min. spaces are covered in  $(\frac{60}{55} * 60)$ min. = 65  $\frac{5}{11}$  min.

Loss in 64 min. =  $(65 \frac{5}{11} - 64) = \frac{16}{11}$  min.

Loss in 24 hrs =  $(\frac{16}{11} * \frac{1}{64} * 24 * 60)$  min. = 32  $\frac{8}{11}$  min.

**#218** [Explained](#) [Report](#) [Bookmark](#)

**At what time between 8 and 9'o clock will the hands of a clock be in the same straight line. but not together?**

null

- **A**  
5  $\frac{5}{11}$

- **B**  
10  $\frac{1}{11}$
- **C**  
8  $\frac{1}{11}$
- **D**  
7  $\frac{2}{11}$

**Correct Answer :B**

## Explanation

When the hands of the clock are in the same line, but in opposite direction, they are 30 minutes spaces apart.

At 8'o clock they are 20 min. spaces apart

minute hand will have to gain only 10 min.spaces

10 min.spaces are gained in  $[(60/55) * 10] = 120/11 = 10 \frac{1}{11}$  past 8.

**#219** [Explained](#) [Report](#) [Bookmark](#)

**How many times in a day, the hands of a clock are straight?**

null

- **A**  
22
- **B**  
24
- **C**  
44
- **D**  
48

**Correct Answer :C**

## Explanation

In 12 hours, the hands coincide or are in opposite direction 22 times.

In 24 hours, the hands coincide or are in opposite direction 44 times a day

#220 [Explained](#) [Report](#) [Bookmark](#)

How many times do the hands of a clock coincide in 24 hrs?

null

- **A**  
20
- **B**  
21
- **C**  
22
- **D**  
24

Correct Answer :C

## Explanation

The hands of a clock coincide 11 times in every 12 hours (Since between 11 and 1, they coincide only once, *i.e.*, at 12 o'clock).

AM

12:00 ,1:05, 2:11, 3:16 ,4:22, 5:27 ,6:33, 7:38 ,8:44, 9:49 ,10:55

PM

12:00 ,1:05, 2:11, 3:16 ,4:22, 5:27 ,6:33, 7:38 ,8:44, 9:49 ,10:55

Therefore 22 times its possible

**#221** **Explained** **Report** **Bookmark**

Three partners shared the profit in a business in the ratio 5 : 7 : 8. They had partnered for 14 months, 8 months and 7 months respectively. What was the ratio of their investments?

- **A**  
5 : 7 : 8
- **B**  
20 : 49 : 64
- **C**  
38 : 28 : 21
- **D**  
None of these

**Correct Answer :B**

## Explanation

$$14x : 8y : 7z = 5 : 7 : 8.$$

$$\Rightarrow x=5/14, y=7/8, z=8/7.$$

take l.c.m of 14,8,7. we get 56.

$$x = 5/14 * 56 = 20.$$

$$y = 7/8 * 56 = 49.$$

$$z = 8/7 * 56 = 64.$$

So, investments  $x:y:z = 20:49:64$ .

#222 [Explained](#) [Report](#) [Bookmark](#)

A man took loan from a bank at the rate of 12% p.a. simple interest. After 3 years he had to pay Rs. 5400 interest only for the period. The principal amount borrowed by him was:

null

- **A**  
2000
- **B**  
10000
- **C**  
15000
- **D**  
20000

**Correct Answer :C**

## Explanation

$$SI = \frac{PNR}{100}$$

$$5400 = \frac{P * 12 * 3}{100}$$

$$P = \frac{(5400 * 100)}{(12 * 3)}$$

$$P = 15000$$

#223 [Explained](#) [Report](#) [Bookmark](#)



A tank is filled in 5 hours by three pipes A, B and C. The pipe C is twice as fast as B and B is twice as fast as A. How much time will pipe A alone take to fill the tank?

null

- **A**  
20 hours
- **B**  
25 hours
- **C**  
35 hours
- **D**  
None of these

**Correct Answer :C**

## Explanation

suppose A fills the tank in x hours.

therefore  $A+B+C=5$

$$\frac{1}{x} + \frac{2}{x} + \frac{4}{x} = \frac{1}{5}$$

$$\frac{7}{x} = \frac{1}{5}$$

$$x=35$$

**#224** [Explained](#) [Report](#) [Bookmark](#)

A alone can do a piece of work in 6 days and B alone in 8 days. A and B undertook to do it for Rs. 3200. With the help of C, they completed the work in 3 days. How much is to be paid to C?

null

- **A**  
Rs. 375
- **B**  
. Rs. 400
- **C**  
. Rs. 600
- **D**  
Rs. 80

**Correct Answer :B**

## Explanation

$$A+B+C=3$$

Calculate the one days work of C

$$1/6 + 1/8 + 1/x = 1/3$$

$$48/14 + 1/x = 1/3$$

$$1/x = 1/3 - 14/48$$

$$x=24$$

$$C \text{'s share} = (3 \times 1/24 \times 3200)$$

$$=400$$

**#225** [Explained](#) [Report](#) [Bookmark](#)

The ratio between the perimeter and the breadth of a rectangle is 5 : 1. If the area of the rectangle is 216 sq. cm, what is the length of the rectangle?

null

- **A**  
16 cm
- **B**  
. 18 cm
- **C**  
24 cm
- **D**  
None of these

**Correct Answer :B**

## Explanation

: let  $l=y$  and  $b=x$

perimeter=  $2(l+b)$

$$5x = 2(y+x)$$

$$3x = 2y$$

Now Area= $l*b$

$$216=y*x$$

$$216=(3x/2)*x$$

$$216*2=3x^2$$

$$144 = x^2$$

$$x=12$$

Now put the value of x in above equation

$$216 = y * 12$$

$$y = 216 / 12$$

$$y = 18$$

**#226** [Explained](#) [Report](#) [Bookmark](#)

**Sachin is younger than Rahul by 7 years. If their ages are in the respective ratio of 7 : 9, how old is Sachin?**

null

- **A**  
16 years
- **B**  
18 years
- **C**  
28 years
- **D**  
24.5 years

**Correct Answer :D**

## Explanation

difference between the ratio is 2 and age difference is 7 years

therefore  $1 = 3.5$

Then  $7 = 24.5$

**#227** Explained Report Bookmark

A man standing at a point P is watching the top of a tower, which makes an angle of elevation of  $30^\circ$  with the man's eye. The man walks some distance towards the tower to watch its top and the angle of the elevation becomes  $60^\circ$ . What is the distance between the base of the tower and the point P?

null

- **A**  
4√3 units
- **B**  
8 units
- **C**  
12 units
- **D**  
. Data inadequate

Correct Answer :D

## Explanation

not a single distance is given to calculate the distance between base and P

**#228** Explained Report Bookmark

Robert is travelling on his cycle and has calculated to reach point A at 2 p.m. if he travels at 10 kmph, he will reach there at 12 noon if he travels at 15 kmph. At what speed must he travel to reach A at 1 p.m.?

null

- **A**  
8 kmph
- **B**  
11 kmph
- **C**  
12kmph

- **D**  
14 kmph

**Correct Answer :B**

## Explanation

Let  $S_1=16$ ,  $S_2=15$  t(difference in timing)=2 and D(total distance)

$$D=(2*S_1*S_2*t)/(S_2-S_1)$$

$$=(2*10*15*2)/(15-10)$$

$$D=120\text{km}$$

2] Speed =Distance/time

$$1) 10=120/x$$

$$x=12$$

$$2) 15= 120/x$$

$$x=8$$

So to reach at 1 pm x must be 10 therefore

$$\text{Speed} = 120/10$$

Speed is 12km/hr

The sum of how many terms of the series  $6 + 12 + 18 + 24 + \dots$  is 1800 ?

- **A**  
16
- **B**  
24
- **C**  
20
- **D**  
18

Correct Answer :B

## Explanation

sum of  $n$  terms  $= \frac{n}{2}(2a + (n-1)d)$

$$1800 = \frac{n}{2}(2 \cdot 6 + (n-1) \cdot 6)$$

$$1800 = \frac{n}{2}(12 + 6n - 6)$$

$$1800 = \frac{n}{2}(6 + 6n)$$

$$3600 = 6n + 6n^2$$

Divided both side by 6

$$600 = n + n^2$$

$$n^2 + n - 600 = 0$$

$$(n+25)(n-24) = 0$$

$$n = -25, 24$$

N can't be negative therefore the ans is 24

**#230** [Explained](#) [Report](#) [Bookmark](#)

A can contains a mixture of two liquids A and B is the ratio 7 : 5. When 9 litres of mixture are drawn off and the can is filled with B, the ratio of A and B becomes 7 : 9. How many litres of liquid A was contained by the can initially?

null

- **A**  
10
- **B**  
20
- **C**  
21
- **D**  
25

Correct Answer :C

## Explanation

: initial ratio of A:B is 7:5 therefore liquid of A must be multiple of 7 so the ans is 21.

**#231** [Explained](#) [Report](#) [Bookmark](#)

There are two pipes A and B. If A filled 10 liters in an hour, B can fill 20 liters in same time. Likewise B can fill 10, 20, 40, 80, 160. If B filled in 1/16 of a tank in 3 hours, how much time will it take to fill the tank completely?

null

- **A**  
9



- **B**  
8
- **C**  
7
- **D**  
6

Correct Answer :C

## Explanation

let tank is of 160litre

$160/16 = 10$  litre

10 litre in 3 hrs

So 20 in 4 hrs

40 in 5hrs

80in 6hrs

160 in 7 hrs

#232 [Explained](#) [Report](#) [Bookmark](#)

If a tank A can be filled within 10 hours and tank B can be filled  $\frac{1}{4}$  in 19 hours then, what is the time taken to fill up the tank completely?

null

- **A**  
21

- **B**  
38
- **C**  
57
- **D**  
76

Correct Answer :D

## Explanation

$\frac{1}{4}$  filled in 19 hrs

So to full  $4 \times \frac{1}{4} = 19 \times 4$

$$\Rightarrow 1 = 76$$

#233 **Explained** **Report** **Bookmark**

In a market, 4 men are standing. The average age of the four before 4 years is 45, after some days one man is added and his age is 49. What is the average age of all?

null

- **A**  
43
- **B**  
45
- **C**  
47
- **D**  
49

Correct Answer :D

## Explanation

before 4 years the avg of 4 men's age is 45 therefore actual sum of age is 180. After 4 years the sum of age of those 4 members is 196 and one men of age 49 is added to the avg so the sum becomes 245 which is divided by 5 to calculate avg of 5 men and which is 49.

**#234** [Explained](#) [Report](#) [Bookmark](#)

In a shopping mall with a staff of 5 members, the average age is 45 years. After 5 years a person joined them and the average age is again 45 years. What is the age of 6th person?

null

- **A**  
25
- **B**  
20
- **C**  
45
- **D**  
30

**Correct Answer :B**

## Explanation

present condition avg of 5 members is 45 therefore actual sum of age is 225. After 5 years the sum of previous 5 members age is 250(increase each members age by 5) Now the avg of 6 members is also 45 so the sum of age of 6 members is 270 and previous 5 members sum is 250 so the difference in the sum is the age of 6th member which is 20.

**#235** [Explained](#) [Report](#) [Bookmark](#)

An inlet pipe can fill a tank in 24 hours but because of a leak, it takes 16 hours more to fill the tank. In how many hours can the leak empty the tank?

null

- **A**  
40 hrs
- **B**  
48 hrs
- **C**  
60 hrs
- **D**  
120 hrs

**Correct Answer :B**

## Explanation

Let actual time to fill the tank =x

Time to fill the tank with leakage =y

Time to empty the filled tank=z

Therefore  $Z = (x*y)/(x-y)$

$= (24*16)/(24-16)$

=48

**#236** **Explained** **Report** **Bookmark**

**Ram is twice as efficient as Shyam. Working together, they can finish a job in 32 days. In how many days can Ram finish the job alone**

- **A**  
32

- **B**  
16
- **C**  
32/3
- **D**  
4

**Correct Answer :C**

## Explanation

Given:

Ram is twice as good a workman as Sham

Ram can finish a piece of work in 16 days less than Sham

Formula:

$$(A + B)\text{'s 1 day work} = 1/A + 1/B$$

Calculation:

Ratio of times taken by Ram and Sham = 1 : 2.

The time difference is  $(2 - 1) = 1$  days

Sham take 2 days and Ram takes 1 day.

If difference of time is 1 day, B takes 2 days.

If difference of time is 16 days,

Sham takes  $2 \times 16 = 32$  days.

So, Ram takes 16 days to do the work.

Ram's 1 day's work =  $1/32$

Sham's 1 day's work =  $1/16$

(Ram + Sham)'s 1 day's work =  $1/32 + 1/16 = 3/32$  work

$\Rightarrow 32/3$  days =  $10(2/3)$

$\therefore$  Ram and Sham together can do the work in  $10(2/3)$  days.

### #237 **Explained** **Report** **Bookmark**

Two pipes fill a tank in 8 and 12 hrs respectively, third pipe can empty the tank 6 hrs, they start at 1pm, 2pm and 3pm respectively then at what time tank will be filled?

null

- **A**  
6 am
- **B**  
7 am
- **C**  
8 am
- **D**  
9 am

**Correct Answer :B**

## Explanation

at 1 pm tank filled =  $\frac{1}{8}$

2 pm =  $\frac{1}{8} + \frac{1}{12} = \frac{20}{96}$

till 3 pm =  $\left(\frac{20}{96} + \frac{1}{8}\right)$  part filled.

i.e. =  $\frac{32}{96}$

Remaining part =  $1 - \frac{32}{96} = \frac{64}{96}$  i.e.  $\frac{2}{3}$

after 3 pm =  $\left(\frac{1}{8} + \frac{1}{12} - \frac{1}{6}\right)$  filled per hr.

=  $\frac{1}{24}$

$\therefore \frac{\frac{2}{3}}{\frac{1}{24}} = 16 \text{ hrs.}$

i.e. 7 in next day morning i.e. 7 am.

#238 [Explained](#) [Report](#) [Bookmark](#)

Every day Meena's husband meets her at the city railway station at 6 pm and drives her to their residence by car. One day she left early from the office and reached the railway station at 5 pm. She started walking towards her home, met her husband coming from their residence on the way and they reached home 10 minutes earlier than the usual time. For how long did she walk?

- **A**  
60 minutes

- **B**  
50 minutes
- **C**  
65 minutes
- **D**  
. 55 minutes

Correct Answer :D

## Explanation

meena leaves office 1 hr means 60 minute early.

.meena and husband save 10 minutes..

so if husband does not meet his wife then he has to go  $(10/2)=5$  minutes more.

.so meena walk for  $(60-5)=55$  minutes.

**#239** [Explained](#) [Report](#) [Bookmark](#)

Amit is traveling back after visiting his friend in a distant village. When he started from his friend's house the car had exactly 18 liters of petrol in it. He traveled along at a steady 40 kilometers per hour and managed a 10 kilometers per liter of petrol. As the car is old, the fuel tank lost fuel at the rate of half a liter per hour. Amit was lucky as his car just stopped in front of his house because it had run out of fuel and he only just made it. How far was it from his friend's house to Amit's house (in km)?

null

- **A**  
150
- **B**  
170
- **C**  
180



- **D**  
160

Correct Answer :D

## Explanation

Quantity of petrol consumed in 1 hour:  $(40/10 + 1/2)$  litres = 4.5 litres

Time for which the fuel lasted :  $(18/4.5)$  hrs = 4 hrs

Required distance =  $(40 \times 4)$  km = 160 km

#240 **Explained** **Report** **Bookmark**

In a 500m race, Ravi beats Ramesh by 5 seconds or 100m. They decide to run another race and this time Ravi gives Ramesh a head start of 200m. If Ravi's speed is twice his previous speed and Ramesh's speed is one and half times his previous speed, how far from the start should the winning post be so that they finish at the same time (in meters)?

null

- **A**  
500
- **B**  
1000
- **C**  
1500
- **D**  
2000

Correct Answer :B

## Explanation

Ravi beats Ramesh by 5 seconds or 100 m. It means, Ramesh goes 100 meters in 5 sec and 500 meters in 25sec. Therefore Ravi goes 500m in 20 sec.

Let the distance between the starting point and finishing point is x

$$x/25=(x+200)/20$$

$$x= 1000\text{m}$$

## #241 [Explained](#) [Report](#) [Bookmark](#)

Only a single rail track exists between station A and B on a railway line. One hour after the northbound super fast train N leaves station A for Station B, a southbound passenger train S reaches station A from station B. The speed of the super-fast train is twice that of a normal express train E, while the speed of a passenger train S is half that of E. On a particular day N leaves for station B from Station A, 20 minutes behind the normal schedule. In order to maintain the schedule, both N and S increased their speed. If the super fast train doubles its speed, what should be the ratio (approximately) of the speed of passenger train to that of the super-fast train so that passenger train S reaches exactly at the scheduled time at station A on that day?

null

- **A**  
1 : 3
- **B**  
1 : 4
- **C**  
1 : 5
- **D**  
1 : 6

Correct Answer :D

## Explanation

ratio between the super fast train N and Passenger train S = 1:4

Time taken by train S =  $\frac{4}{5} \times 60 = 48$  mins

Time taken by train N =  $\frac{1}{5} \times 60 = 12$  mins

when N leaves 20 mins behind the schedule, it doubles its speed,

Now it will take  $\frac{12}{2} = 6$  mins to cover the distance

This means that it is 14 mins behind schedule ( $20 \times 6 = 14$  mins)

So, Train S will be late by 14 mins as well =  $48 - 14 = 34$  mins

Now, the ratio changes to 6:34 = 1:6

**#242** [Explained](#) [Report](#) [Bookmark](#)

A train approaches a tunnel AB. Inside the tunnel is a cat located at a point that is  $\frac{3}{8}$  of the distance AB measured from the entrance A. When the train whistles the cat runs. If the cat moves to the entrance of the tunnel A, the train catches the cat exactly at the entrance. If the cat moves to the exit, B, the train catches the cat at exactly the exit. The speed of the train is greater than the speed of the cat by what order?

null

- **A**  
3 : 1
- **B**  
4 : 1
- **C**  
5 : 1
- **D**  
. none of these

**Correct Answer :B**

## Explanation

Let the length of the tunnel be  $x$  and distance of the train to entrance A be  $y$ . Let the speeds of train and cat be  $t$  and  $c$  respectively.

Therefore when the cat runs  $3x/8$ , the train covers  $y$ .

$$(3x/8)/c = y/t$$

When the cat runs  $5x/8$  to the other end, the train covers  $x+y$

$$(5x/8)/c = (x+y)/t$$

$$3/5 = y/(x+y) \Rightarrow 3x = 2y$$

$$(2y/8)/c = y/t$$

$$t = 4 C$$

**#243** [Explained](#) [Report](#) [Bookmark](#)

On a 20 km tunnel connecting two cities A and B there are three gutters. The distance between gutter 1 and 2 is half the distance between gutter 2 and 3. The distance from city A to its nearest gutter, gutter 1 is equal to the distance of city B from gutter 3. On a particular day the hospital in city A receives information that an accident has happened at the third gutter. The victim can be saved only if an operation is started within 40 minutes. An ambulance started from city A at 30 km/hr and crossed the first gutter after 5 minutes. If the driver had doubled the speed after that, what is the maximum amount of time the doctor would get to attend the patient at the hospital? Assume 1 minute is elapsed for taking the patient into and out of the ambulance.

null

- **A**  
4 minutes

- **B**  
2.5 minutes
- **C**  
1.5 minutes
- **D**  
Patient died before reaching the hospital

**Correct Answer :C**

## Explanation

Let the distance btwn gutter 1 and A be  $x$  and btwn gutter 1 and 2 be  $y$ .

Therefore  $x + y + 2y + x = 20 \Rightarrow 2x + 3y = 20$

$x = 30\text{kmph} \times \frac{5}{60} = 2.5\text{km}$

Therefore  $y = 5\text{km}$

After the ambulance doubles its speed it goes at  $60\text{kmph}$  i.e.  $1\text{km per min}$ .

Therefore time taken for the rest of the journey  $= 15 \times 2 + 2.5 = 32.5$

It takes  $1\text{ min}$  to load and unload the patient.

Therefore total time  $= 5 + 32.5 + 1 = 38.5\text{ mins}$

Therefore the doctor would get  $1.5\text{ min}$  to attend to the patient

**#244** [Explained](#) [Report](#) [Bookmark](#)

A chemical plant has four tanks (A, B, C and D), each containing 1000 litres of a chemical. The chemical is being pumped from one tank to another as follows: From A to B @ 20 litres/minute From C to A @ 90 litres/minute From A to D @ 10 litres/minute From C to D @ 50 litres/minute From B to C @ 100 litres/minute From D to B @ 110

litres/minute Which tank gets emptied first, and how long does it take (in minutes) to get empty after pumping starts?

null

- **A**  
A, 16.66
- **B**  
C, 20
- **C**  
D, 20
- **D**  
D, 25

Correct Answer :C

## Explanation

Explanation- After 1 min the cans will contain following amount of chemicals : A - 1060 B - 1030 C - 970 D - 950

So, we can see that the can D loses 50 ltrs in 1 min which is highest. So the can D will lose 1000 ltrs in  $20 \times 1 = 20$  mins

#245 **Explained** **Report** **Bookmark**

Three numbers which are co-prime to each other are such that the product of the first two is 551 and that of the last two is 1073. The sum of the three numbers is:

null

- **A**  
75
- **B**  
81
- **C**  
85

- **D**  
89

**Correct Answer :C**

## Explanation

the num are co-prime they contain only 1 as the common factor and the given two products have the middle num in common.

Therefore middle number = H.C.F. of 551 and 1073

$$551 = 19 \times 29$$

$$1073 = 29 \times 37$$

$$\text{HCF} = 29$$

$$\text{1st num} = 551/29 = 19$$

$$\text{3rd num} = 1073/29 = 37$$

$$\text{sum} = 19 + 29 + 37 = 85$$

**#246** **Explained** **Report** **Bookmark**

A sum of Rs. 12,500 amounts to Rs. 15,500 in 4 years at the rate of simple interest. What is the rate of interest?

null

- **A**  
0.03
- **B**  
0.04
- **C**  
0.05
- **D**  
0.06

Correct Answer :C

## Explanation

Handwritten solution showing the calculation of the rate R:

$$SI = \frac{PNR}{100}$$

$$SI = 15500 - 12500 = 3000$$

$$\therefore 3000 = \frac{12500 \times 4 \times R}{100}$$

$$R = \frac{3000 \times 100}{12500 \times 4}$$

$$R = \frac{3000}{125} = 24\%$$

$$R = 6\% = 0.06$$

#247 **Explained** **Report** **Bookmark**

A, B, C subscribe Rs. 50,000 for a business. A subscribes Rs. 4000 more than B and B Rs. 5000 more than C. Out of a total profit of Rs. 35,000, A receives

null

- **A**  
. Rs. 8400
- **B**  
. Rs. 11,900



- **C**  
Rs. 13,600
- **D**  
Rs. 14,700

Correct Answer :D

## Explanation

$$\begin{aligned}
 A + B + C &= 50,000 \\
 \text{Let } C &= x \therefore B = C + 5000 \text{ \& } A = C + 9000 \\
 \therefore C + 9000 + C + 5000 + C &= 50,000 \text{ /-} \\
 \therefore 3C &= 50,000 - 14,000 \\
 3C &= 36,000 \\
 \therefore C &= 12,000 \text{ /-} \\
 B &= 17,000 \text{ /-} \\
 A &= 21,000 \text{ /-} \\
 \text{Total Profit} &= 35,000 \text{ /-} \\
 A : B : C & \\
 21000 : 17000 : 12000 & \\
 \left| \begin{array}{l} \frac{35000}{50} = 700 \\ \therefore A = 700 \times 21 \\ = 14,700 \end{array} \right.
 \end{aligned}$$

#248 **Explained** **Report** **Bookmark**

A, B and C can do a piece of work in 20, 30 and 60 days respectively. In how many days can A do the work if he is assisted by B and C on every third day?

- **A**  
12 days
- **B**  
15 days
- **C**  
16 days
- **D**  
18 days

**Correct Answer :B**

## Explanation

A is working alone for two days, 3rd day he is assisted by B and C.

A's 1 day work= $\frac{1}{20}$

A working on 2 days= $2 \times \frac{1}{20} = \frac{1}{10}$

A+B+C working on 3rd day, so 1 day of working together= $\frac{1}{20} + \frac{1}{30} + \frac{1}{60} = \frac{6}{60} = \frac{1}{10}$

So total work done till 3rd day= $\frac{1}{10} + \frac{1}{10} = \frac{2}{10} = \frac{1}{5}$

So if in 3 days =  $\frac{1}{5}$  of work is completed....

Than,  $3 \times 5$  days =  $\frac{1}{5} \times 5$  work will be completed.

=15days

**#249** [Explained](#) [Report](#) [Bookmark](#)

In what ratio must a grocer mix two varieties of tea worth Rs. 60 a kg and Rs. 65 a kg so that by selling the mixture at Rs. 68.20 a kg he may gain 10%?

null

- **A**  
  . 3:2
- **B**  
  . 3:4
- **C**  
  . 3:5
- **D**  
  . 4:5

Correct Answer :A

## Explanation

The image shows handwritten calculations on lined paper. At the top, the formula  $\frac{68 \cdot 20}{x} \times 100 = 110$  is written. Below it, the calculation is rearranged to  $x = \frac{6 \cdot 20}{\frac{68 \cdot 20}{110} \times 100}$ . The final result is  $x = 62$ . Below the calculations is a diagram showing the numbers 60 and 65 at the top, connected by lines to the number 62 in the center. From 62, two lines extend downwards to the numbers 3 and 2, with a colon (:) placed between them.

#250 [Explained](#) [Report](#) [Bookmark](#)

A farmer travelled a distance of 61 km in 9 hours. He travelled partly on foot @ 4 km/hr and partly on bicycle @ 9 km/hr. The distance travelled on foot is:

null

- **A**  
14 km
- **B**  
15 km
- **C**  
16 km
- **D**  
17 km

Correct Answer :C

## Explanation

Handwritten solution on lined paper:

Let the distance travelled on foot be  $x$  km & by bicycle  $= (61-x)$

$$\therefore \frac{x}{4} + \frac{61-x}{9} = 9$$
$$\frac{9x + 4(61-x)}{36} = 9$$
$$9x + 244 - 4x = 9 \times 36$$
$$5x + 244 = 324$$
$$5x = 80$$
$$x = 16$$

#251 [Explained](#) [Report](#) [Bookmark](#)

The angle of elevation of a ladder leaning against a wall is  $60^\circ$  and the foot of the ladder is 4.6 m away from the wall. The length of the ladder is:

null

- **A**  
2.3m
- **B**  
4.6m
- **C**  
7.8m
- **D**  
9.2m

Correct Answer :D

## Explanation

Angle =  $60^\circ$  and distance between wall and ladder = 4.6 m.

Length of ladder = 2 x distance between wall and ladder

=  $(2 \times 4.6)$  m

= 9.2 m.

#252 [Explained](#) [Report](#) [Bookmark](#)

Two pipes A and B can fill a tank in 20 and 30 minutes respectively. If both the pipes are used together, then how long will it take to fill the tank?

null

- **A**  
12 min
- **B**  
15 min
- **C**  
25 min
- **D**  
50 min

Correct Answer :A

## Explanation

=>  $1/20 + 1/3$

=>  $20 \times 30 / 50$

$$\Rightarrow 600/50$$

$$\Rightarrow 12 \text{ min}$$

**#253** [Explained](#) [Report](#) [Bookmark](#)

The difference of the squares of two consecutive odd integers is divisible by which of the following integers?

- **A**  
3
- **B**  
6
- **C**  
7
- **D**  
8

Correct Answer :D

## Explanation

Let the two consecutive odd integers be  $(2x + 1)$  and  $(2x + 3)$

Then,

$$(2x + 3)^2 - (2x + 1)^2$$

$$= (2x + 3 + 2x + 1) (2x + 3 - 2x - 1)$$

$$= (4x + 4)(2)$$

$$= 8(x + 1), \text{ which is always divisible by 8}$$

**#254** [Explained](#) [Report](#) [Bookmark](#)

Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?

- **A**  
1
- **B**  
10
- **C**  
15
- **D**  
16

Correct Answer :D

## Explanation

First take out LCM OF 2, 4, 6, 8, 10, 12

$$\text{LCM } (2 \times 2 \times 2 \times 3 \times 5) = 120$$

That means in 120 min = 2 hours

In 30 hours they commenced =  $30 / 2 = 15$

Total times they commenced =  $15 + 1$  (initial)

= 16 times

**#255** [Explained](#) [Report](#) [Bookmark](#)

At 3:40, the hour hand and the minute hand of a clock form an angle of:

- **A**  
 $120^\circ$
- **B**  
 $125^\circ$

- **C**  
130°
- **D**  
135°

**Correct Answer :C**

## Explanation

Total angle =  $360^\circ$

1 hour = 60 min

Angle per min =  $360/60 = 6^\circ$  per min

As minute hand is at 40 min =  $40 \text{ min} \times 6 = 240^\circ$

Since clock has 12 hours,

Angle per hour =  $360/12 = 30^\circ$  per hour =  $3 \text{ hrs} \times 30 = 90^\circ$

Hour hand is Actually in between 3 and 4 and since we are looking at 3:40 , hour hand is not exactly at 3 . 40 min means  $2/3$  of an hour .

$$90 + 2/3 \times 30 = 110^\circ$$

$$\text{Angle at 3 :40} = |110 - 240| = |-130| = 130^\circ$$

**#256** [Explained](#) [Report](#) [Bookmark](#)

$$51 + 52 + 53 + \dots + 100) = ?$$



null

- **A**  
2525
- **B**  
2975
- **C**  
3225
- **D**  
3775

Correct Answer :D

## Explanation

$a=51, n=50, d=1$

$\text{Sum} = n/2[2a + (n-1)d]$ .

$= 50/2[2*51 + (50-1)*1]$ .

$= 25[102 + 49]$ .

$= 25*151$ .

$= 3775$ .

**#257** [Explained](#) [Report](#) [Bookmark](#)

On 8th Feb, 2005 it was Tuesday. What was the day of the week on 8th Feb, 2004?

- **A**  
Tuesday
- **B**  
Monday

- **C**  
Sunday
- **D**  
Wednesday

**Correct Answer :C**

## Explanation

The year 2004 is a leap year. It has 2 odd days.

∴ The day on 8th Feb, 2004 is 2 days before the day on 8th Feb, 2005.

Hence, this day is Sunday.

**#258** **Explained** **Report** **Bookmark**

At present, the ratio between the ages of Arun and Deepak is 4 : 3. After 6 years, Arun's age will be 26 years. What is the age of Deepak at present

- **A**  
12 years
- **B**  
15 years
- **C**  
19 & half
- **D**  
21 year

**Correct Answer :B**

## Explanation

Let the rational between their ages be x, therefore Arun's age is 4x and Deepak age is 3x

Thus after 6 years their respective ages will be,

Arun's age after 6 years =  $4x + 6$

Deepak's age after 6 years =  $3x + 6$

As per statement after 6 years, Arun's age will be 26 years, means

$$4x + 6 = 26$$

On solving the equation

$$4x = 26 - 6 =$$

$$x = 5$$

Age of Arun :  $4x = 4 \times 5 = 20$  years

Age of Deepak :  $3x = 3 \times 5 = 15$  years

**#259** [Explained](#) [Report](#) [Bookmark](#)

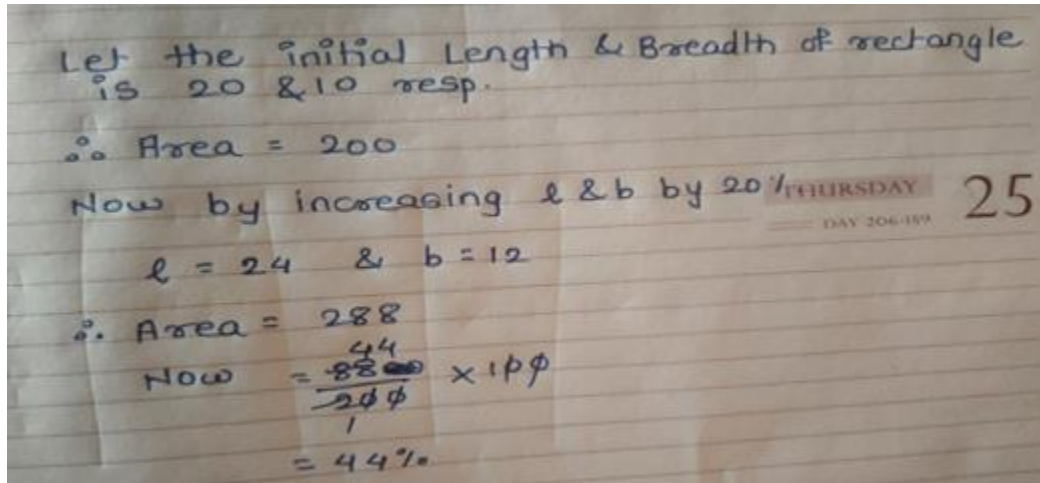
**The percentage increase in the area of a rectangle, if each of its sides is increased by 20% is:**

null

- **A**  
40%
- **B**  
42%
- **C**  
44%
- **D**  
46%

Correct Answer :C

## Explanation



#260 [Explained](#) [Report](#) [Bookmark](#)

Find the odd one out- Red, Pink, Green, Violet, Yellow

null

- **A**  
Red
- **B**  
Pink
- **C**  
Green
- **D**  
Violet & Yellow

Correct Answer :B

## Explanation

Except pink all others are colours of rainbow

## #261 **Explained** **Report** **Bookmark**

Six students A,B,C,D,E,F have to choose 2 subjects each out of Physics, Chemistry, Maths and Economics such that no two students choose the same pair of subjects. C, D and F have one subject in common. Similarly A,E,F have also one subject in common. In both the cases the subjects are neither Maths nor Economics. The subjects chosen by A were entirely different from D. One subject chosen by A matched with one of the subjects of B and this subject was not Economics. One of the subjects of C was Physics. Which of the subjects has been chosen by C?

null

- **A**  
Maths, Physics
- **B**  
Chemistry, Physics
- **C**  
Economics, Physics
- **D**  
None of these

**Correct Answer :A**

## Explanation

	Phy	Chem	Maths	Eco
A	X	✓	✓	X
B	X	X	✓	✓
C	✓	X	✓	X
D	✓	X	X	✓
E	X	✓	X	✓
F	✓	✓	X	X

#262 [Explained](#) [Report](#) [Bookmark](#)

In a colony, the number of people who can speak English, Hindi and Telugu are 100, 120 and 150 respectively. The total number of people in the colony is 250. If each person in the colony can speak at least one of these three languages, then what is the maximum possible number of people who can speak all the three languages?

null

- **A**  
60
- **B**  
90
- **C**  
45
- **D**  
None of these

**Correct Answer :D**

## Explanation

Let the max people who speak all lang is X,

Person who speak english= $100-X$ ,

Person who speak hindi= $120-x$

Person who speak telugu= $150-x$

$$100-x+120-x+150-x=250$$

$$370=3x=250$$

$$120=3x$$

$$x=40$$

**#263** [Explained](#) [Report](#) [Bookmark](#)

3 members are to be selected from six members- A,B,C,D,E and F. A and B cannot be selected together and F is selected only if D is selected. B and C if selected should be selected together and E is selected only if A is selected. Who must be in the selected group?

null

- **A**  
A
- **B**  
D
- **C**  
E
- **D**  
F

**Correct Answer :B**

**Explanation**

D is only one person who is not restricted so that D is person must selected in group.

**#264** [Explained](#) [Report](#) [Bookmark](#)

For Ajay, the number of brothers was 4 more than the number of sisters. For his sister Banu, the number of brothers was thrice the number of sisters. How many brothers and how many sisters does Ajay have?

null

- **A**  
8 brothers, 4 sisters
- **B**  
9 brothers, 5 sisters
- **C**  
7 brothers, 3 sisters
- **D**  
6 brothers, 2 sisters

**Correct Answer :A**

## Explanation

according to question consider sister is S and brother is B

Related to Ajay  $B=B+4$ , And Banu  $3s=s$

Both condition satisfied option A

**#265** [Explained](#) [Report](#) [Bookmark](#)

The population of a country three years ago was 2 millions. It increased by 20% in the first year, decreased by 20% in the second year and after that, decreased by 10% in the third year. Find the present population of that country. (in million)

null



- **A**  
1.536
- **B**  
1.944
- **C**  
1.728
- **D**  
None of these

**Correct Answer :C**

## Explanation

20% of 2million =400000

2mill+400000=2400000

20% of 2400000=480000

2400000-480000=1920000

10% of 1920000=192000

1920000-192000=1728000

**#266** [Explained](#) [Report](#) [Bookmark](#)

**Find the wrong term in the sequence given below. 60, 62, 66, 72, 82, 90, 102, 116**

null

- **A**  
116
- **B**  
90
- **C**  
82
- **D**  
72

**Correct Answer :C**

## Explanation

IN each term differences is 2,4,6,8....

So the wrong term is 82.

Correct Series 60 62 66 72 80 90 102 116

**#267** [Explained](#) [Report](#) [Bookmark](#)

If 10 men can eat a total of 200 kg of food in 2 weeks, how much food (in kg) can 8 men eat in 10 weeks?

null

- **A**  
400
- **B**  
600
- **C**  
800
- **D**  
1000

**Correct Answer :C**

## Explanation

$$(M1 \cdot D1 \cdot H1) / W1$$

$$= (M2 \cdot D2 \cdot H2) / W2$$

$$10 \cdot 2 / 200 = 8 \cdot 10 / X$$

$$X = 800$$

#268 [Explained](#) [Report](#) [Bookmark](#)

How many spheres of diameter 0.6 cm each can be made from a metallic cuboid of dimensions 18cm \* 11cm \* 10cm?

null

- **A**  
17500
- **B**  
8750
- **C**  
6250
- **D**  
3750

Correct Answer :A

## Explanation

Radius of each lead sphere =  $0.6/2$  cm

No .of spheres = volume of cuboid / volume of each sphere

$$=lbh/(4/3 \cdot 22/7 \cdot r^3)$$

$$1000 \cdot 1980 \cdot 3 \cdot 7/4 \cdot 22 \cdot 27$$

17500

**#269** [Explained](#) [Report](#) [Bookmark](#)

If the cost of fuel increases by 25%, then by what percentage should the consumption be reduced such that the expenditure remains unchanged?

null

- **A**  
25%
- **B**  
20%
- **C**  
33 1/3%
- **D**  
50%

**Correct Answer :B**

## Explanation

$$a/100 + a \cdot 100\%$$

$$= 25/125 \cdot 100\%$$

$$= 20\%$$

**#270** [Explained](#) [Report](#) [Bookmark](#)

In a prize distribution ceremony of a painting competition, three prizes were distributed. The worth of the second prize was four-fifth of the worth of the first prize .the worth of

the third prize was three-fourth of the worth of the second prize. If the total worth of the three prizes is Rs. 15720, what are the respective (in rupees) of the first, second and third prizes?

null

- **A**  
6240, 4992, 3748
- **B**  
6600, 5280, 3840
- **C**  
6550, 5240, 3930
- **D**  
None of these

**Correct Answer :C**

## Explanation

consider A,B,C Participant 1st is the and and so on.

Let prize of A is X ,B = $4X/5$ ,C= $12X/20$

$$X + 4X/5 + 12X/20 = 15720$$

$$X = 6550$$

To find value of B PUT X IN  $4(6550)/5 = 5240$ ,  $c = 12(6550)/20 = 3930$

**#271** **Explained** **Report** **Bookmark**

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

null

- **A**  
15 kmph
- **B**  
12 kmph
- **C**  
10kmph
- **D**  
5 kmph

**Correct Answer :A**

## Explanation

use formula Distance=Time\*Speed

$$D=90 *60 /10=15\text{km}$$

**#272** **Explained** **Report** **Bookmark**

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

null

- **A**  
Rs. 1000
- **B**  
Rs. 1100
- **C**  
Rs. 1050
- **D**  
Rs. 1200

**Correct Answer :A**

## Explanation

$$SI = \text{PRINCIPLE} \times \text{TIME} \times \text{RATE} / 100$$

$$(\text{AMOUNT} = SI + \text{PRINCIPLE})$$

$$1120 - P = 5 \times P \times 12 / 500$$

$$P = 1000$$

#273 [Explained](#) [Report](#) [Bookmark](#)

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?

- **A**  
9:1
- **B**  
4:7
- **C**  
7:1
- **D**  
2:5

Correct Answer :A

## Explanation

Ratio of milk and water = 3 : 2

Quantity of milk =  $\frac{3}{5} \times 20 = 12$  litres

Quantity of water =  $20 - 12 = 8$  litres

If 10 litres of mixture is removed,

Quantity of milk removed by =  $\frac{3}{5} \times 10 = 6$  liters

Quantity of water removed by =  $10 - 6 = 4$  liters.

Remaining milk =  $12 - 6 = 6$  liters

Remaining water =  $8 - 4 = 4$  liters

10 liters of pure milk are added, then quantity of milk =  $(6 + 10) = 16$  litres.

The ratio of milk and water in the new mixture =  $16 : 4 = 4 : 1$

If the process is repeated once again, then 10 litres of the mixture is removed,

Quantity of milk removed by =  $(\frac{4}{5}) \times 10 = 8$  litres.

Quantity of water removed by =  $10 - 8 = 2$  litres.

Remaining quantity of milk =  $(16 - 8) = 8$  litres.

Remaining quantity of water =  $(4 - 2) = 2$  litres.

If 10 litres of milk is added, then the new quantity of milk =  $10 + 8 = 18$  litres

$\therefore$  Ratio of milk and water in the final mixture =  $18 : 2 = 9 : 1$ .



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?

null

- **A**  
25 litres
- **B**  
28 litres
- **C**  
30 litres
- **D**  
35 litres

Correct Answer :C

## Explanation

Total Cost Of Milk  $40 \times 3.5 = 140$

Reduced Cost / Liter = 2

Total Number of Liters =  $140/2 = 70$

Total Number of Liters of Water =  $70 - 40 = 30$

**#275** [Explained](#) [Report](#) [Bookmark](#)

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

null

- **A**  
123
- **B**  
127

- **C**  
235
- **D**  
305

**Correct Answer :B**

## Explanation

given if question ask greatest number then find HCF

= H.C.F. of  $(1657 - 6)$  and  $(2037 - 5)$

= H.C.F. of 1651 and 2032 = 127

**#276** **Explained** **Report** **Bookmark**

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

null

- **A**  
200 m
- **B**  
225 m
- **C**  
245 M
- **D**  
250 m

**Correct Answer :C**

## Explanation

$$L(\text{Bridge}) + L(\text{Train}) = \text{Speed of train} * \text{time}$$

$$L(\text{Bridge}) = (12.5 \text{ m/s} * 30\text{s}) - 130\text{m}$$

$$= 245\text{m}$$

#277 [Explained](#) [Report](#) [Bookmark](#)

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?

null

- **A**  
30 days
- **B**  
40 days
- **C**  
60 days
- **D**  
70 days

**Correct Answer :C**

## Explanation

A+B do a work in=30 days

A do work for=16 days

Remaining work is =30–16=14

And remaining work 14 completed by B in =44 days

$$B \text{ work} = 44 - 16 = 28$$

B do alone the job in  $= 28 \times 30 / 14 = 2 \times 30 = 60$  days.

**#278** [Explained](#) [Report](#) [Bookmark](#)

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?

null

- [A](#)  
5
- [B](#)  
6
- [C](#)  
7
- [D](#)  
8

Correct Answer :C

## Explanation

there are 7 combination (ABC,BCE,ABE,ACE,ABD,BDE,ADE)

**#279** [Explained](#) [Report](#) [Bookmark](#)

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:

null

- **A**  
276
- **B**  
299
- **C**  
322
- **D**  
345

**Correct Answer :C**

## Explanation

HCF is 23. Other 2 factors of LCM are 13 and 14.

larger number can be  $23 \times 14 = 322$ .

**#280** [Explained](#) [Report](#) [Bookmark](#)

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

null

- **A**  
5%
- **B**  
6%
- **C**  
4 1/2%
- **D**  
3 1/2%

**Correct Answer :A**

## Explanation

$$SI = PTR/100$$

$$160 = 800 \times 4 \times R/100$$

$$R = 5\%$$

### #281 [Explained](#) [Report](#) [Bookmark](#)

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

null

- **A**  
3.5 km/hr
- **B**  
5.75 km/hr
- **C**  
6.5 km/hr
- **D**  
7 km/hr

**Correct Answer :A**

## Explanation

speed downstream = 15.5 kmph

Speed upstream = 8.5 kmph

Speed of the stream =  $\frac{1}{2}(15.5 - 8.5) = 3.5$  kmph

## #282 [Explained](#) [Report](#) [Bookmark](#)

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:

null

- **A**  
15
- **B**  
16
- **C**  
18
- **D**  
25

**Correct Answer :B**

### Explanation

CP of each article is 1 unit i.e 20 article =20 unit.

SP of 1 article=20/x

Profit%=((SP-CP)/CP)\*100

$25 = (((20-x)/x)/1) * 100 \mid 25x/100$

X =16

## #283 [Explained](#) [Report](#) [Bookmark](#)

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 :

- **A**  
8 days
- **B**  
12 days
- **C**  
10 days
- **D**  
12 days

**Correct Answer :B**

## Explanation

Let total work  $\text{LCM}(15,10)=30$  unit

A complete 2 unit per day

B complete 3 unit per day.

Work together 2 days completing  $2*(2+3)=10$  unit.

Total time to taken  $=2+10 =12$  days.

**#284** **Explained** **Report** **Bookmark**

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

null

- **A**  
104 m
- **B**  
125 m
- **C**  
140 m



- **D**  
152 m

**Correct Answer :B**

## Explanation

$$D=ST$$

$$D=25M/SEC*5$$

$$D=125M$$

**#285** [Explained](#) [Report](#) [Bookmark](#)

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

null

- **A**  
Sunday
- **B**  
Sunday
- **C**  
Tuesday
- **D**  
Friday

**Correct Answer :D**

## Explanation

The year 2006 is ordinary year it has 1 odd day.

2006 is one year beyond 2007 so 8th dec 2006 is Friday.

**#286** Explained Report Bookmark

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

null

- **A**  
65 sec
- **B**  
89 sec
- **C**  
100 sec
- **D**  
150 sec

**Correct Answer :B**

## Explanation

The train is 240 m passes the pole 24 sec

hence, speed of of train is  $240/24 = 10$  m/sec.to pass a platform length 650m

it should pass the platform length and its own length  $(240+650)=890$  and speed 10 m/sec that way time 89 sec.

**#287** Explained Report Bookmark

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

- **A**  
2:1
- **B**  
5:3
- **C**  
6:5
- **D**  
5:6

Correct Answer :C

## Explanation

according ratio logic

4:5

3:2

-----

=> 12:15:10

12:10

=> 6:5

Hences ratio of vijay and abhishek is 6:5

**#288** [Explained](#) [Report](#) [Bookmark](#)

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

null

- **A**  
60 kmph
- **B**  
10 kmph
- **C**  
30 kmph
- **D**  
5 kmph

**Correct Answer :C**

## Explanation

Speed of the man in still water =  $\frac{1}{2}(U+D)$

$$= \frac{1}{2}(25+35)$$

$$= 30 \text{ kmph}$$

**#289** [Explained](#) [Report](#) [Bookmark](#)

The greatest number of four digits which is divisible by 15, 25, 40 and 75 is:

null

- **A**  
9000
- **B**  
9400
- **C**  
9600
- **D**  
9800

**Correct Answer :C**

## Explanation

Greatest number of 4-digits is 9999.

L.C.M. of 15, 25, 40 and 75 is 600.

On dividing 9999 by 600, the remainder is 399.

∴ Required number  $(9999 - 399) = 9600$ .

#290 [Explained](#) [Report](#) [Bookmark](#)

Find the highest common factor of 36 and 84.

null

- [A](#)  
4
- [B](#)  
6
- [C](#)  
12
- [D](#)  
18

Correct Answer :C

## Explanation

$$36 = 3 \times 3 \times 2 \times 2$$

$$84 = 7 \times 3 \times 2 \times 2$$

from this

$$\text{HCF} = 2 \times 2 \times 3 = 12$$

hence the Highest common factor of 36 and 84 is 12.

**#291** [Explained](#) [Report](#) [Bookmark](#)

If  $(64)^2 - (36)^2 = 20 \times Z$ , then  $Z = ?$

- **A**  
70
- **B**  
120
- **C**  
180
- **D**  
140

**Correct Answer :D**

## Explanation

$$20z = (64)^2 - (36)^2$$

$$20z = (64 + 36) (64 - 36)$$

$$20z = 100 \times 28$$

$$z = (100 \times 28) / 20$$

$$= 140$$

**#292** [Explained](#) [Report](#) [Bookmark](#)

The sum of how many terms of the series  $6 + 12 + 18 + 24 + \dots$  is 1800 ?

null

- **A**  
16
- **B**  
24
- **C**  
20
- **D**  
18

**Correct Answer :B**

## Explanation

Sum of n terms is =  $(6+6x)x/2 = 1800$

first term=6

common difference =6

by formula, sum of n terms= $n/2[2a+(n-1)d]$

$$1800=n/2[12+(n-1)6]$$

$$3600=n[12+6n-6]$$

$$3600=6n+6n^2$$

$$6n^2+6n-3600=0$$

$$n^2+n-600=0$$

$$n^2+25n-24n-600=0$$

$$n(n+25)-24(n+25)=0$$

$$(n+25)(n-24)=0$$

$$\text{so, } n=24$$

### #293 [Explained](#) [Report](#) [Bookmark](#)

Two pipes fill a tank in 8 and 12 hrs respectively, third pipe can empty the tank 6 hrs, they start at 1pm, 2pm and 3pm respectively then at what time tank will be filled?

null

- **A**  
6 am
- **B**  
7 am
- **C**  
8 am
- **D**  
9 am

**Correct Answer :B**



## Explanation

Tank position at 3pm is

$$1/4 + 1/12 = 4/12 = 1/3 \text{ full}$$

To be filled is  $2/3$

All are open at 3pm

Effective filling per hour is

$$1/8 + 1/12 - 1/6 = (3+2-4)/24 = 1/24 \text{th per hour}$$

Time to fill full is 24 hrs

$$\text{Time to fill } 2/3 = 24 \times 2/3 = 16 \text{ hrs}$$

Time of filling is next day morning 7 AM

#294 [Explained](#) [Report](#) [Bookmark](#)

Some toys were distributed equally among 18 children in such a way that the number of toys each child gets is equal to the total number of children and after distribution 6 toys are left out. What was the total number of toys?

null

- **A**  
324
- **B**  
330
- **C**  
336

- **D**  
320

Correct Answer :B

## Explanation

330 is the answer

as the no of toys are equal to no of students

$$18 \times 18 = 324$$

left out toys after distribution = 6

$$\text{so } 324 + 6 = 330$$

**#295** [Explained](#) [Report](#) [Bookmark](#)

Kishor was asked to calculate the arithmetic mean of ten positive integers each of which had two digits. By mistake, he interchanged the two digits, say  $a$  and  $b$ , in one of these ten integers. As a result, his answer for the arithmetic mean was 1.8 more than what it should have been. Then  $b - a$  equals

null

- **A**  
1
- **B**  
2
- **C**  
3
- **D**  
none of these

Correct Answer :B

## Explanation

Given that average before interchanging = average after interchanging + 1.8

$$(ba + x)/10 = (ab+x)/10 + 1.8$$

or

$$ba + x = ab + x + 18$$

ba can be written as  $10b + a$  and ab can be written as  $10a + b$

$$10b + a + x = 10a + b + x + 18$$

or

$$b-a = 2$$

**#296** Explained Report Bookmark

Three types of tea a ,b and c cost Rs.95/kg,100/kg and 70/kg respectively. How many kgs of each should be blended to produce 100 kg of mixture worth Rs.90/kg, given that the quantities of band c are equal

null

- **A**  
70,15,15
- **B**  
50,25,25

- **C**  
60,20,20
- **D**  
40,30,30

**Correct Answer :B**

## Explanation

Let the quantity of b be x

The quantity of c = x

The quantity of a =  $100 - x - x = 100 - 2x$

Find the price for 100 kg:

1 kg = Rs 90

100 kg =  $90 \times 100 = \text{Rs } 9000$

Solve x:

The total cost is Rs 9000

$$95(100 - 2x) + 100x + 70x = 9000$$

$$9500 - 190x + 100x + 70x = 9000$$

$$20x = 500$$

$$x = 25 \text{ kg}$$

Find the quantity of each type:

$$b = x = 25 \text{ kg}$$

$$c = x = 25 \text{ kg}$$

$$a = 100 - x = 100 - 2(25) = 50 \text{ kg}$$

Answer: 50 kg of a, 25 kg of b and 25 kg of c

**#297** [Explained](#) [Report](#) [Bookmark](#)

The CI for two years on a principal of Rs.800 is Rs.352. Find the rate of interest.

null

- **A**  
5
- **B**  
10
- **C**  
15
- **D**  
20

**Correct Answer :B**

## Explanation

$$\text{AMOUNT} = P\{1 + R/100\}^N$$

$$1152 = 800\{1 + r/100\}^2$$

$$1152 = 800*(100 + R/100)^2$$

$$1152/800=(100+R/100)^2$$

$$R=20$$

**#298** Explained Report Bookmark

A certain number of workmen can do a piece of work in 25 days, in what time will another set of an equal number of men do a piece of work twice as great supposing that 2 men of the first set can do as much work in a hour as 3 men in the second set can do in an hour?

null

- **A**  
60 days
- **B**  
75 days
- **C**  
90 days
- **D**  
105 days

**Correct Answer :B**

## Explanation

Let the required number of hours be x.

Speeds of working of first and second type of men are 12 and 13

More work, More time (Direct Proportion)

Less speed, More time (Indirect Proportion)

$$\{Work1:2Speed13:12\}::25:x$$

$$\therefore (1 \times 13 \times x) = (2 \times 12 \times 25)$$

$$x = 75$$

**#299** Explained Report Bookmark

A display flashes an alphabet after every 13 seconds. How many times will it flash between 1:57:58 am and 3:20:47 am?

null

- **A**  
384
- **B**  
390
- **C**  
400
- **D**  
360

**Correct Answer :B**

## Explanation

after subtraction two address = 1: 22: 49 which is  $49 + 60(22) + 60(60)1$  seconds which is 4969 seconds

Divided by 13 is 382.2 .

So if you mean how many COMPLETE, 13 second glows, then the answer is 382 which is "none of the above"

If the timing were just right so you got a flicker at the beginning then the answer is

$$383+1=384$$

**#300** **Explained** **Report** **Bookmark**

A's income is 60 % of B's income. A's expenditure is 70% of B's expenditure. A's income is 80% of B's expenditure. What is the ratio of their savings?

null

- **A**  
3 : 13
- **B**  
1: 4
- **C**  
3 : 10
- **D**  
4 : 5

**Correct Answer :C**

## Explanation

Let B's income=100

Then A's income 60% of 100=60

A's income 60 is 70% of B's expenditure

Then B's expenditure= $60/70 \times 100 = 85.71$  and B's savings is  $25(100-85.71)$

A's expenditure is 70% of B's expenditure

Then A's expenditure=  $70/100 \times 85.71 = 60$  and A's savings is  $60-60=0$

Then ratio of A and B's savings is  $0:25=0:1$



**#301** **Explained** **Report** **Bookmark**

A person with some money spends  $\frac{1}{3}$  for clothes,  $\frac{1}{5}$  of the remaining for food and  $\frac{1}{4}$  of the remaining for travel. He is left with Rs100/- . How much did he have with him in the beginning?

- **A**  
200
- **B**  
250
- **C**  
300
- **D**  
400

**Correct Answer :B**

## Explanation

Assume that initially, he had Rs.  $X$

He spent  $\frac{1}{3}$  for cloths  $= \frac{1}{3} \times X$

Remaining money  $= \frac{2}{3} \times X$

He spent  $\frac{1}{5}$  of remaining money for food  $= \frac{1}{5} \times \frac{2}{3} \times X = \frac{2X}{15}$

Remaining money  $= \frac{2X}{3} - \frac{2X}{15} = \frac{8X}{15}$

Again, he spent  $\frac{1}{4}$  of remaining money for travel  $= \frac{1}{4} \times \frac{8X}{15} = \frac{2X}{15}$

Remaining money  $= \frac{8X}{15} - \frac{2X}{15} = \frac{6X}{15}$

But after spending for travel he is left with Rs. 100. So,

$$6x/15=100$$

$$x=\text{Rs.}250$$

**#302** [Explained](#) [Report](#) [Bookmark](#)

A frog is at the bottom of a well which is 30m deep. With each jump the frog climbs 5m but due to the slippery surface, it slides back 3m. In how many jump can the frog reach the top o the well?

null

- **A**  
12
- **B**  
13
- **C**  
14
- **D**  
15

**Correct Answer :C**

## Explanation

Net ascend per day =5–3= 2foot

$$30-3=27 \text{ feet}$$

2foot climbed in 1 day

$$27 \text{ feet climbed in } 27/2 =13 \text{ days}$$

And rest 3 feet climbed in 1 day and escapes before slipping down

So  $13 + 1 = 14$  days

**#303** [Explained](#) [Report](#) [Bookmark](#)

Instead of walking along two adjacent sides of a rectangular field, a boy took a short cut along the diagonal and saved a distance equal to half the longer side. Then the ratio of the shorter side to the longer side is:

null

- **A**  
1/2
- **B**  
3/4
- **C**  
1/4
- **D**  
2/3

**Correct Answer :B**

## Explanation

Pythagoras theorem

1.  $A^2 + B^2 = C^2$  (Diagonal)

our Equation

2.  $C = (A+B) - A/2$

Apply pythagoras and substituting C from 2.

$$A^2/4+B^2+AB = A^2+B^2$$

$$AB= \frac{3}{4}A^2$$

$$4B=3A$$

Ratio 4:3(Shorter side to longer side)

**#304** [Explained](#) [Report](#) [Bookmark](#)

A college has raised 75% of the amount it needs for a new building by receiving an average donation of Rs 600 from the people already solicited. The people already solicited represent 60% of the total people the college will ask for donations. If the college is to raise exactly the amount needed for the new building, what should be the average donation from the remaining people to be solicited?

null

- **A**  
400Rs
- **B**  
250Rs
- **C**  
300Rs
- **D**  
500Rs

**Correct Answer :C**

## Explanation

Let the number of people be x who has been asked for the donations

People already solicited = 60% of x = 0.6x

Remaining people = 40% of  $x = 0.4x$

Amount collected from the people solicited,

$$= 600 \times 0.6x = 360x$$

$360x = 75\%$  of the amount collected

Remaining amount =  $25\% = 120x$

Thus,

Average donations from remaining people,

$$= 120x / 0.4x = 300$$

**#305** [Explained](#) [Report](#) [Bookmark](#)

Mustafa sold a chair of his for Rs.56 and earned a profit percentage equal to that of the cost price. Determine the cost price of his chair?

null

- **A**  
30
- **B**  
35
- **C**  
40
- **D**  
45

**Correct Answer :C**

**Explanation**

Let x be the CP. So, the profit percentage will be x too.'

$$Sp = x + (x \cdot x)/100$$

$$56 = x + x^2/100$$

$$5600 = 100x + x^2$$

$$x^2 + 100x - 5600 = 0$$

$$x^2 + 140x - 40x - 5600 = 0$$

$$x(x+140) - 40(x+140) = 0$$

$$x = -140, x = 40$$

Hence, The Cp of the chair will be Rs. 40.

**#306** [Explained](#) [Report](#) [Bookmark](#)

Sushant spends 15% of his pocket money in paying the fee of a gymnasium. After spending 60% of the remaining money, he is left with Rs.400. How much money did Sushant have initially?

null

- **A**  
Rs.2234 approx
- **B**  
Rs.1176 approx

- **C**  
Rs.3452 approx
- **D**  
Rs.976 approx.

**Correct Answer :B**

## Explanation

If initially Ram had  $100x$ , he lends Sushan spend  $15x$  and is left with  $85x$ .

Now of the  $85x$  he spends  $600\%$  and hence is left  $34x$

Therefore,  $34x=400$

$$x=34/400$$

The amount Ram lends to Shyam is  $20000/17 = 1176.46$

**#307** **Explained** **Report** **Bookmark**

A takes 18 while B takes 9 days to do a certain piece of work. A starts working and B joins him after 3 days and together they finish the work. Find the total number of days taken to finish the work.

null

- **A**  
7
- **B**  
8
- **C**  
9
- **D**  
6

Correct Answer :B

## Explanation

let consider A+B work in x day

One day work of a+b=3 unit

$$3/18+x/6=1$$

$$x=5$$

Total no of days=3+5=8 days

#308 [Explained](#) [Report](#) [Bookmark](#)

After offering a discount of 20% on the MRP of Rs.500, an article is sold at a profit of 25%. Find the CP of the article.

null

- [A](#)  
300
- [B](#)  
320
- [C](#)  
280
- [D](#)  
240

Correct Answer :B

## Explanation

MRP =500



Discount =20%

Therefore

$$\text{New SP} = 500 - 20/100 * 500 = 500 - 100 = 400$$

Now Profit =25%

Let CP =x

$$\text{Therefore } x + 25/100 * x = 400$$

$$5/4 * x = 400$$

$$x = 400 * 4/5$$

$$x = \text{CP} = 320 \text{MRP} = 500$$

Discount =20%

$$\text{Therefore New SP} = 500 - 20/100 * 500 = 500 - 100 = 400$$

Now Profit =25%

Let CP =x

$$\text{Therefore } x + 25/100 * x = 400$$

$$5/4 * x = 400$$

$$x = 400 * 4/5$$

$$x = CP = 320$$

**#309** [Explained](#) [Report](#) [Bookmark](#)

8 men or 12 women do equal amount of work in a day. 6 men and 5 women finish the job in 6 days. How many women are required to finish the job in 21 days.

null

- **A**  
4
- **B**  
5
- **C**  
6
- **D**  
7

**Correct Answer :A**

## Explanation

Lets assume total  $LCM(8,12) = 36$ units.

As, 8 men or 12 women do equal amount of work in a day,

1 Man does 12units/day and 1 Woman does 8units/day.

6M and 5W in 6days do  $(6*12 + 8*5)*6 = 672$ units

To do 490 units in 14 days, number of Women required =  $672/(21*8) = 4$

**#310** [Explained](#) [Report](#) [Bookmark](#)

The ratio of the number of boys and girls in a school is 5:4 Of these 60% boys and 75% of girls pass the English test. Find the percentage of students who failed the test.

null

- **A**  
65%
- **B**  
66.66%
- **C**  
33.33%
- **D**  
50%

**Correct Answer :C**

## Explanation

Boys ratio =5/9

Girls ratio =4/9

Boys pass percentage =  $100 - 60 = 40\%$

Girls pass percentage =  $100 - 75 = 25\%$

Total pass percentage =  $40/100 * 5/9 + 25/100 * 4/9$

= 33.33%

A person with some money spends  $\frac{1}{3}$  for clothes,  $\frac{1}{5}$  of the remaining for food and  $\frac{1}{4}$  of the remaining for travel. He is left with Rs100/- . How much did he have with him in the beginning?

null

- **A**  
200
- **B**  
250
- **C**  
300
- **D**  
400

**Correct Answer :B**

## Explanation

Let the amount of money be x

cloths  $\frac{1}{3} \times x = \text{rs. } \frac{x}{3}$

balance =  $x - \frac{x}{3} = \frac{2x}{3}$

food =  $\frac{1}{5} \times \frac{2x}{3} = \frac{2x}{15}$

balance =  $\frac{2x}{3} - \frac{2x}{15} = \frac{8x}{15}$

travel =  $\frac{1}{4} \times \frac{8x}{15} = \frac{2x}{15}$

now he has 100 rupees

$\frac{2x}{5} = 100$

$$2x = 500$$

$$x = 500/2$$

$$x = 250$$

#312 [Explained](#) [Report](#) [Bookmark](#)

In an election between two candidates, one got 55% of the total valid votes, 20% of the votes were invalid. If the total number of votes was 7500, the number of valid votes that the other candidate got, was :

null

- **A**  
2500
- **B**  
2700
- **C**  
2900
- **D**  
3100

**Correct Answer :B**

## Explanation

otal number of votes = 7500

Given that 20% of Percentage votes were invalid

=> Valid votes = 80%

Total valid votes =  $7500 \times (80/100)$

1st candidate got 55% of the total valid votes.

Hence the 2nd candidate should have got 45% of the total valid votes

=> Valid votes that 2nd candidate got = total valid votes  $\times$  (45/100)

$$7500 \times (80/100) \times (45/100) = 2700$$

**#313** [Explained](#) [Report](#) [Bookmark](#)

In a 300m race, A beats B by 24m or 6 seconds. Find the time taken by A to finish the race.

null

- **A**  
75 sec
- **B**  
81 sec
- **C**  
69 sec
- **D**  
60 sec

**Correct Answer :C**

## Explanation

B speed  $\text{at} = 24/6 = 4 \text{ m/sec}$

B time to cover distances  $= 300/4 = 75 \text{ sec}$

A cover distance  $= 75 - 6 = 69 \text{ sec}$ .

**#314** [Explained](#) [Report](#) [Bookmark](#)

A tank can be filled in x hours, but because of a leak, it takes 40 hours to fill the tank. Find x if the leak can empty the tank in 60 hours.

null

- **A**  
30
- **B**  
24
- **C**  
36
- **D**  
20

Correct Answer :B

## Explanation

A time takes x hours  $\frac{1}{X} - \frac{1}{60} = \frac{1}{40}$

X=24 HOURS

#315 **Explained** **Report** **Bookmark**

Fifty minutes ago if it was four times as many minutes past three o'clock, how many minutes is it to six o'clock?

null

- **A**  
22
- **B**  
24
- **C**  
26
- **D**  
28

Correct Answer :C

## Explanation

The time between 3'O clock and 6'O clock is 180 minutes.

Let x be the minutes to 6'O clock from Now.

So, the time from 3'O clock to Now(x) is,  $180-x$  minutes.

50 minutes ago from  $(180-x)$  ..... $(180-x)-50 \Rightarrow 130-x$

x is 4 times as many minutes past 3'O clock (Minutes past 3'O clock is  $130-x$ )

$$4x = 130 - x$$

$x = 26$  minutes, i.e., 26 minutes is left to 6'O clock.

#316 [Explained](#) [Report](#) [Bookmark](#)

There are 600 tennis players ,4% wear wrist band on one wrist Of the remaining, 25% wear wrist bands on both hands How many players don't wear a wrist band?

null

- **A**  
340
- **B**  
432
- **C**  
412
- **D**  
320



Correct Answer :B

## Explanation

there are 600 tennis player

4percent wear wrist band on one wrist

remaining players =  $600 \times 0.96 = 576$

of the remaining , 25percent wear wrist band on the both hands and of the remaining ,75percent do not wear wrist bandsso,players not wearing wrist bands  
 $= 0.75 \times 576 = 576 \times \frac{3}{4} = 144 \times 3 = 432$

#317 [Explained](#) [Report](#) [Bookmark](#)

Two distinct no's are taken from 1,2,3,4.....28. Find the probability that their sum is less than 13.

null

- [A](#)  
5/63
- [B](#)  
10/67
- [C](#)  
1/14
- [D](#)  
13/28

Correct Answer :A

## Explanation

total pair of numbers whose sum is less than 13 are 30

(1,2),(1,3),(1,4),(1,5),(1,6),(1,7),(1,8),(1,9),(1,10),(1,11),(2,3),(2,4),(2,5),(2,6),(2,7),  
(2,8),(2,9),(2,10),(3,4),(3,5),(3,6),(3,7),(3,8),(3,9),(4,5),(4,6),(4,7),(4,8),(5,6),(5,7)

number of ways to take two number from 1 to 28 will be  $28 \times 27$

so probability will be  $30/756$

so answer is  $5/63$

**#318** [Explained](#) [Report](#) [Bookmark](#)

A number is decreased by 20% and then increased by 40%. Find the percentage change in the number.

- **A**  
20
- **B**  
12
- **C**  
30
- **D**  
40

**Correct Answer :B**

## Explanation

CONSIDER value is 100

decreased by 20% that is 80 and after 80 increased by 40% i.e.=12

**#319** [Explained](#) [Report](#) [Bookmark](#)

The price of 4 apples and 6 mangoes is Rs.62 and the price of 6 apples and 4 mangoes is Rs.58. Find the price of 3 apples and 5 mangoes.

null

- **A**  
Rs.45
- **B**  
Rs.34
- **C**  
Rs.60
- **D**  
Rs.50

**Correct Answer :D**

## Explanation

CONSIDER X for apple and Y for mango

So,  $4x+6y=62$  and  $6x+4y=58$  evaluate two equation i.e  $x=5$  and  $y=7$

the price of 3 apples and 5 mangoes. $=3*5+5*7=50$ .

**#320** [Explained](#) [Report](#) [Bookmark](#)

**Find the odd one out- Paragraph, Sentence, Words, Page, Alphabets**

null

- **A**  
Paragraph
- **B**  
Sentence
- **C**  
Words
- **D**  
Page

**Correct Answer :D**

## Explanation

in paragraph no.of line ,in one line no of words and in word no.of alphabets.page is not related in this.

#321 **Explained** **Report** **Bookmark**

Walking at  $\frac{3}{4}$ th of his regular speed, Sanjay is 16 minutes late in reaching the office. Find the usual time that he takes to reach the office.

null

- **A**  
48 min
- **B**  
60 min
- **C**  
36 min
- **D**  
42 min

**Correct Answer :A**

## Explanation

Let  $s$  = his normal speed

$t$  = his normal time

Then

$$D = \left(\frac{3}{4}\right)s * (t+16)$$

Since the distance is the same we can equate this to his regular day which is  $D = s \cdot t$

$$s \cdot t = \left(\frac{3}{4}\right)s \cdot (t+16)$$

Time = 48

**#322** [Explained](#) [Report](#) [Bookmark](#)

A train moves at a constant speed of 120 km/hr for one km and at 40 km/hr for the next km. Find the average speed of the train.

null

- **A**  
60 kmph
- **B**  
80 kmph
- **C**  
64 kmph
- **D**  
90 kmph

**Correct Answer :A**

## Explanation

Total distance for the journey be  $d = 1 \text{ km} + 1 \text{ km} = 2 \text{ km}$

Speed for first 1 km = 120 km/h

Speed for second 1 km = 40 km/h

$$2xy/x+y$$

$$=2*120*40/120+40$$

$$=9600/160$$

$$=60 \text{ kmph}$$

#323 [Explained](#) [Report](#) [Bookmark](#)

A can finish a piece of work in 10, while B can finish it in 20 days. They start working together and after 5 days, A leaves the job. Find the number of days in which B will finish the remaining work.

null

- [A](#)  
2
- [B](#)  
3
- [C](#)  
4
- [D](#)  
5

Correct Answer :D

## Explanation

A one day work is  $1/10$  days, B one day work is  $1/20$  day

Both a and b work for one day i.e  $1/10+1/20=3/20$

$$15/20+x/20=1$$

$$X =5$$

### #324 [Explained](#) [Report](#) [Bookmark](#)

Two trains starting at the same time, one from Bangalore to Mysore and other in opposite direction arrive at their destination 1 hr and 4 hours respectively after passing each other. How much faster is one train from other?

null

- **A**  
4 times
- **B**  
thrice
- **C**  
twice
- **D**  
Cannot be determined

Correct Answer :C

## Explanation

the train is twice faster than the other train, because after crossing each other

speed of train A/speed of train B=square root of(time taken by B/time taken by A)

=2:1

### #325 [Explained](#) [Report](#) [Bookmark](#)

Father's age is three years more than three times the son's age. After three years, father's age will be ten years more than twice the son's age. What is the father's present age?

null

- **A**  
30

- **B**  
33
- **C**  
36
- **D**  
39

**Correct Answer :B**

## Explanation

Let the son's age be  $x$ .

Then, according to the condition given, father's age =  $3x + 3$

3 years later

Son's age =  $x + 3$  Father's age =  $3x + 3 + 3 = 3x + 6$  According to the condition given,

$$3x + 6 = 10 + 2(x + 3)$$

$$3x + 6 = 10 + 2x + 6$$

$$x = 10$$

Thus, the son's present age is 10 years and the father's age is  $3(10) + 3 = 33$  years.



The difference between two numbers is 1550. If 8 % of one number is 10 % of the other number, then find the two numbers

null

- **A**  
4973, 6523
- **B**  
5450, 7000
- **C**  
6200, 7750
- **D**  
6500, 4950

**Correct Answer :C**

## Explanation

Let the 1st no. be x

So, Second no. =1500+x

8% of x= 10% of 1500+x

$\frac{8}{100} \times x = \frac{10}{100} \times 1500 + x$

$\frac{2x}{25} = 1500 + x$

$20x = 38750 + 25x$

$25x - 20x = 38750$

$5x = 38750$

$$x = 38750/5 = 7750$$

Step-by-step explanation:

So the 1st no. = 7750

2nd no. = 6200

**#327** [Explained](#) [Report](#) [Bookmark](#)

Two numbers P and Q are such that, the sum of 2 % of P and Sum of 2 % of Q is two-third of the sum of 2 % of P and 6 % of Q. Find the ratio of P and Q.

null

- **A**  
2 : 5
- **B**  
3 : 1
- **C**  
1 : 4
- **D**  
5 : 1

**Correct Answer :B**

## Explanation

According to the question,

$$2\% \text{ of } P + 2\% \text{ of } Q = \frac{2}{3}(2\% \text{ of } P + 6\% \text{ of } Q)$$

$$\frac{2}{100} P + \frac{2}{100} Q = \frac{2}{3} \left( \frac{2}{100} P + \frac{6}{100} Q \right)$$

$$\frac{1}{50}P + \frac{1}{50}Q = \frac{1}{75}P + \frac{1}{25}Q$$

$$\left(\frac{1}{50} - \frac{1}{75}\right)P = \frac{1}{25} - \frac{1}{50}$$

$$\frac{1}{150}P = \frac{1}{50}Q$$

$$P/Q = 150/50$$

$$P/Q = 3/1$$

So, the correct answer to the question is Option B- 3:1.

**#328** [Explained](#) [Report](#) [Bookmark](#)

50 % of a number is 18 less than two-third of that number. Find the number.

null

- **A**  
123
- **B**  
119
- **C**  
115
- **D**  
108

**Correct Answer :D**

## Explanation

:Let the number be x.

It is given that, 50 % of a number is 18, less than two-third of that number. This means that,

$$x - (50\% \text{ of } x) = 18$$

$$= 2x/3 - 50x/100 = 18$$

$$= 50x = 5400 = 108$$

**#329** [Explained](#) [Report](#) [Bookmark](#)

When 35 is subtracted from a number; it reduces to its 80 %. Find the four-fifth of that number

null

- **A**  
140
- **B**  
125
- **C**  
137
- **D**  
129

**Correct Answer :A**

## Explanation

$$x - 35 = 80x/100$$

$$\Rightarrow x = 175$$

$$\Rightarrow 4x/5 = 4 \times 175/5 = 140.$$

**#330** [Explained](#) [Report](#) [Bookmark](#)

The value of lathe machine depreciates at the rate of 10 % per annum. If the cost of machine at present is Rs. 160,000, then what will be its worth after 2 years?

null

- **A**  
Rs. 122,365
- **B**  
Rs. 153,680
- **C**  
Rs. 129,600
- **D**  
Rs. 119,900

**Correct Answer :C**

## Explanation

The value of machine after n years =  $P[1-R/100]^N$

$$160,00[1-10/100]^2=129,600$$

**#331** **Explained** **Report** **Bookmark**

The value of Xerox machine depreciates at the rate of 10 % per annum. If the cost of machine at present is Rs. 75,000 then what was the value of machine before 2 years?

null

- **A**  
Rs. 90,000
- **B**  
Rs. 92,600
- **C**  
Rs. 93,800
- **D**  
Rs. 95,000

Correct Answer :B

## Explanation

Cost of Xerox machine at present = Rs. 75,000

Rate of depreciation = 10 %

Substituting the given values, we get

The value of machine n years ago  $= P/[1-R/100]^n$

$$7500/[1-10/100]^2=92592.60$$

Approximately Therefore, the value of machine before 2 years = Rs. 92592.60

#332 [Explained](#) [Report](#) [Bookmark](#)

The current birth rate per thousand is 30, whereas corresponding death rate is 10 per thousand. Find the net growth rate in terms of population increase in percent.

null

- **A**  
1.5 %
- **B**  
. 2 %
- **C**  
2.5 %
- **D**  
3 %

Correct Answer :B

## Explanation

:Current birth rate per thousand is 30

Corresponding death rate is 10 per thousand

Hence, net growth on 1000 = Current birth rate - death rate

$$= 30 - 10 = 20$$

We are asked to find, net growth rate in terms of population increase in percent (which means net growth on 100)

$$\text{Net growth on 100} = 20/1000 \times 100 = 2\%$$

**#333** [Explained](#) [Report](#) [Bookmark](#)

The total population of a city is 6500. The number of males and females increases by 5 % and 10 % respectively and consequently the population becomes 7000. Find the number of males in the village.

null

- **A**  
4000
- **B**  
3000
- **C**  
3500
- **D**  
2950

**Correct Answer :B**

## Explanation

We are given that,

1) Total population of city = 6500

2) Increase in male and female population = 5 % & 10% respectively.

3) Final population of city = 7000

Hence,

Let's assume that number of males =  $x$

Number of female =  $6500 - x$

Therefore, after increase in 5 % male and 10 % female, the population becomes 7000

5 % male + 10 % female = Difference between new and original population.

$$5X/100 - 10/100(6500 - x) = 7000 - 6000$$

$$5x + 65000 - 10x = 50000$$

$$5x = 15000$$

$$x = 3000$$

Number of males = 3000

Number of females = 3500



The present population of a country is 10 crores. If it rises to 17.28 crores during next 3 years, then find uniform rate of growth in population.

null

- **A**  
20 %
- **B**  
30 %
- **C**  
40 %
- **D**  
60 %

Correct Answer :A

## Explanation

To find population after n years =  $p[1+r/100]^n$

$$10[1+R/100]^3=17.28$$

$$R/100=2/10$$

$$R=20\%$$

Rate of growth in population = 20 %

**#335** **Explained** **Report** **Bookmark**

The population of different trees in a field increased by 10 % in first year, increased by 8 % in second year and decreased by 10 % in third year. If at present the number of trees is 26730, then find the number of trees in the beginning.

null

- **A**  
30000
- **B**  
25000
- **C**  
27000
- **D**  
27865

**Correct Answer :B**

## Explanation

To find population  $n$  years ago  $= P/[1-R/100]^n$

We are given, number of trees increased in

1) First year = increased by 10 %

2) Second year = increased by 8 %

3) Third year = decreased by 10 %

\To population  $n$  years ago  $= 26730 / ([1-10/100] + [1-8/100] + [1-10/100]) = 25000$

**#336** **Explained** **Report** **Bookmark**

**The price of diesel increases by 50 %. Find by how much percent a truck owner must reduce his consumption in order to maintain the same budget?**

null

- **A**  
11.11 %
- **B**  
22.22 %
- **C**  
33.33 %
- **D**  
44.44 %

**Correct Answer :C**

## Explanation

If the price of goods increases by R %, then the reduction in consumption so as not to increase the expenditure can be calculated using the formula:

$$\{[R/100+R]*100\}\%=(50/100+50)*100\%=33.33\%$$

**#337** [Explained](#) [Report](#) [Bookmark](#)

**The price of rice falls by 15 %. By what percentage a person can increase the consumption of rice so that his overall budget does not change?**

null

- **A**  
10.74 %
- **B**  
17.64 %
- **C**  
20.46 %
- **D**  
21.90 %

**Correct Answer :B**

## Explanation

If the price of goods decreases by R %, then the increase in consumption so as not to decrease the expenditure can be calculated using the formula:  $\left[\frac{R}{100-R}\right] \times 100\%$

$$= (15/100-15) \times 100\% = 17.64\%$$

#338 **Explained** **Report** **Bookmark**

In a science examination, the average obtained by entire class was 80 marks. If 10 % of students scored 92 marks and 20 % of students scored 90 marks, then what was the average of remaining students?

null

- **A**  
65.32
- **B**  
70.56
- **C**  
75.43
- **D**  
77.96

**Correct Answer :C**

## Explanation

Here, we do not know the number of students in the class. So let the number of students be 100 and the required average is y.

1) 10 % of students scored 92 marks

2) 20 % of students scored 90 marks

3) Therefore, from 100 students, the remaining students are 70

4) Average obtained by 100 students = 80 marks

Considering the given parameters, form the equation.

$$(10 \times 92) + (20 \times 90) + (70 \times y) = (100 \times 80)$$

$$70y = 8000 - (1800 + 920)$$

$$y = 75.43$$

The average of remaining students = 75.43

**#339** [Explained](#) [Report](#) [Bookmark](#)

A student attempts  $x$  number of questions. He answers 15 correctly out of first 20 questions and of the remaining questions, he answers  $\frac{1}{3}$  correctly. If all questions have same credit and the student gets 50 % marks, then find the value of  $x$ .

null

- **A**  
30
- **B**  
35
- **C**  
45
- **D**  
50

**Correct Answer :D**

## Explanation

$$15 + \frac{1}{3}(X - 20) = 50\% \text{ of } X$$

$$15 + \frac{X}{3} - \frac{20}{3} = \frac{50}{100} * X$$

$$15 - \frac{20}{3} = \frac{X}{2} - \frac{X}{3}$$

$$\frac{25}{3} = \frac{3X - 3X}{6}$$

$$\frac{25}{3} = \frac{X}{6}$$

$$X = 50$$

**#340** Explained Report Bookmark

A shopkeeper sells an article for Rs. 200 with a loss of Rs. 20 %. Find the cost price of the article.

null

- **A**  
220
- **B**  
250
- **C**  
2801
- **D**  
260

Correct Answer :B

## Explanation

$$CP = ( SP * 100 ) / ( 100 - \text{percentage loss} ).$$

$$200 * 100 / 100 - 20$$

$$250$$

### #341 **Explained** **Report** **Bookmark**

A trader expects a gain of 15 % on his cost price. If in a week his sale is of Rs. 580, then what is his profit?

null

- **A**  
75.65
- **B**  
73.26
- **C**  
72.50
- **D**  
70.78

**Correct Answer :A**

## Explanation

We are given selling price = Rs. 580 and expected profit of 15 %

Therefore, we can easily solve this numerical, considering basic formulae of profit and loss.

Let cost price = x

Selling price = C.P. + Profit

S.P. = C.P. + (15% of C.P.) ----- (We know that profit is gained on cost price)

$$580 = x + (0.15 x)$$

$$580 = 1.15 x$$

Therefore,

$$x = 504.347$$

Cost Price = Rs. 504.35

Now, we have the cost price and hence,

$$\text{Profit} = \text{S. P.} - \text{C.P.} = 580 - 504.35 = \text{Rs. } 75.65$$

The trader gets a profit of Rs. 75.65

**#342** [Explained](#) [Report](#) [Bookmark](#)

**If a boy sells a book for Rs. 450 he gets a loss of 10 %, then find cost price. To gain 10 %, what should be the selling price?**

null

- **A**  
. 400, 500
- **B**  
550, 600
- **C**  
500, 550
- **D**  
475, 525



**Correct Answer :C**

## Explanation

Let C.P. of book = x and S.P. = Rs. 450

S.P. of book = C.P. – (10% of C.P.)

S.P. = x – (0.10x)

450 = 0.9 x

x i.e cost price = Rs. 500

Selling Price to gain 10 %, CP=500

SP=110/100\*500=550

**#343** [Explained](#) [Report](#) [Bookmark](#)

**A merchant sells 30 metres of cloth and gains selling price of 10 metres. Find the gain percent.**

null

- **A**  
15 %
- **B**  
25 %
- **C**  
50 %
- **D**  
75%

**Correct Answer :C**

## Explanation

Here, selling price of 10 m cloth is obtained as profit.

Profit of 10 m cloth = (S.P. of 30 m cloth) – (C.P. of 30 m cloth)

Selling price of 20 m cloth = Selling Price of 30 m of cloth

Let cost of each metre be Rs. 100.

Therefore, cost price of 20 m cloth = Rs. 2000 and S.P. of 20 m cloth = Rs. Rs. 3000

Profit% =  $10/20 \times 100 = 50 \%$

Profit of 50 % was made by the merchant

#344 [Explained](#) [Report](#) [Bookmark](#)

S.P. of 10 candles is same as C.P. of 12 candles. Find the gain percent.

null

- **A**  
11 %
- **B**  
15 %
- **C**  
20 %
- **D**  
25 %

**Correct Answer :C**

## Explanation

No. of X articles = 10

No. of Y articles = 12

Therefore,

$$\text{Profit \%} = (12 - 10)/10 * 100 = 200/10$$

$$\text{Profit \%} = 20 \%$$

**#345** Explained Report Bookmark

The selling price of 40 apples is equal to cost price of 35 apples. Find the profit or loss obtained.

null

- **A**  
Gain of 5.5 %
- **B**  
Gain of 12.5 %
- **C**  
Loss of 5.5 %
- **D**  
Loss of 12.5 %

**Correct Answer :D**

## Explanation

Let C.P. of each apple be Re 1/-.

Therefore,

C.P. of 40 apples = Rs. 40

S.P. of 40 apples = Rs. 35

C.P. of 40 apples > S.P. of 40 apples

Loss = 40 – 35 = Rs. 5

Loss%=(loss/cp)\*100

loss%=(5/40)\*100=12.5%

**#346** [Explained](#) [Report](#) [Bookmark](#)

A man purchased two plots for Rs. 5,00,000. On one he gains 15 % while on the other he losses 15%. Find how much does he gain or lose in the transaction.

- **A**  
1.5 % gain
- **B**  
2 % loss
- **C**  
2.25 % loss
- **D**  
2.25 % gain

**Correct Answer :C**

## Explanation

Generally in such cases, there is always loss.

So always remember, when two materials are sold and if one material gets profit and the other gets a loss, then use the trick shown below to calculate the loss.

$$\text{Loss\%} = [\text{loss or gain\%}/10]^2$$

$$15 \times 15 / 100 = 2.25\% \text{ loss}$$

### #347 **Explained** **Report** **Bookmark**

A boy bought camel and carriage for Rs. 5000. He sells the camel at a gain of 20% and the carriage at a loss of 10%. If he gains 3% on the whole, then find the cost of the camel.

null

- **A**  
2170
- **B**  
2400
- **C**  
2315
- **D**  
2600

**Correct Answer :A**

## Explanation

Now, in this numerical, there is no common loss and gain %.

Hence, solve it making equations.

Let cost price of camel be  $x$ .

As cost of camel and carriage = Rs 5000

Cost of carriage = Rs.  $(5000 - x)$

After selling camel he gains 20% and on carriage a loss of 10%. But on the whole he gains 3%.

Therefore,

$$20\% \text{ of } x - 10\% \text{ of } (5000 - x) = 3\% \text{ of } 5000$$

$$2x - 5000 + x = 1500$$

$$3x = 1500 + 5000$$

$$x = 2166.67$$

The cost of camel = Rs. 2166.67

**#348** [Explained](#) [Report](#) [Bookmark](#)

A man sells one camera A for Rs. 7500 at a gain of 20% and another camera B for Rs. 8550 at a loss of 5%. Find his total loss or gain%.

null

- **A**  
2.7 %
- **B**  
5.2 %

- **C**  
4.2 %
- **D**  
5.1 %

**Correct Answer :B**

## Explanation

Total C.P. = Cost of camera A + Cost of camera B

Total C.P. = 6250 + 9000 = Rs. 15250

Total S.P. = 7500 + 8550 = Rs. 16050

Selling Price > Cost Price, hence man gains during this transaction.

Gain = S.P. – C.P. = 16050 – 15250 = Rs. 800

Gain%=(gain/cp)\*100

gain%=(800/15250)\*100=5.24%

**#349** **Explained** **Report** **Bookmark**

**A shopkeeper sells his goods at cost price but uses a weight of 970 grams for a kg. weight. What is his gain percent?**

null

- **A**  
5.08 %
- **B**  
4.23 %

- **C**  
3.26 %
- **D**  
3.09 %

**Correct Answer :D**

## Explanation

$$\text{GAIN\%} = \left( \frac{\text{ERROR}}{\text{TRUE WEIGHT} - \text{ERROR}} \times 100 \right) \%$$

$$30 / (100 - 30) \times 100 = 3.09\%$$

**#350** **Explained** **Report** **Bookmark**

A dishonest shopkeeper sells his grocery using weights 10 % less than true weights and makes a profit of 30 %. Find his total gain percentage.

null

- **A**  
49.4 %
- **B**  
44.44 %
- **C**  
55.55 %
- **D**  
39.88 %

**Correct Answer :B**

## Explanation

Let weight of grocery bag be 1000 gm.



Now, the shopkeeper sells his grocery using weights 10 % less than true weights.

Hence, actual weight of bag = 90 % of 1000 gm = 900 gm

If each gram = Re.1, C.P. of each bag containing 900 gm = Rs. 900

The shopkeeper sells with a gain of 30 % on true C.P.

Calculate the S.P. =  $([100 + \text{GAIN}\%]/100) \times \text{CP}$

$$\text{S.P.} = 130/100 \times 1000 = 1300$$

$$\text{Gain} = \text{S.P.} - \text{C.P.} = 1300 - 900 = \text{Rs. } 400$$

$$\text{Gain}\% = 400/900 \times 100 = 44.44\%$$

### #351 **Explained** **Report** **Bookmark**

**After two successive discounts, a tie with a list price of Rs. 120 is available at Rs. 90. If second discount is 9 %, what is the first discount?**

null

- **A**  
15.23 %
- **B**  
13.26 %
- **C**  
17.58 %
- **D**  
18.53 %

Correct Answer :C

## Explanation

Let first discount = x

91 % discount of  $(100 - x)$  % of 120 = 90

$$91/100 * (100 - x) / 100 * 120 = 90$$

$$100 - x = (90 * 100 * 100) / (120 * 91) = 82.42$$

$$x = (100 - 82.42) = 17.58$$

Therefore, first discount = 17.58 %

#352 [Explained](#) [Report](#) [Bookmark](#)

Find the single discount equivalent to a series discount of 30 %, 20 % and 10 %.

null

- **A**  
48.3 %
- **B**  
49.6 %
- **C**  
38.21 %
- **D**  
33.33 %

Correct Answer :B

## Explanation

Let marked price be Rs. 100

Therefore, selling price = 90%, 80% and 70% of Rs. 100

$$\text{Selling Price} = 90/100 \times 80/100 \times 70/100 \times 100 = 50.4$$

Required discount = Marked Price – Selling Price

$$= 100 - 50.4$$

$$= 49.6 \%$$

**#353** [Explained](#) [Report](#) [Bookmark](#)

**A dealer marks price of all the goods at 30 % above the cost price and assumes that he will make a profit of 15 % if he offers a discount of 15%. Find what will be his actual profit on sales?**

null

- **A**  
15 %
- **B**  
30 %
- **C**  
12.50 %
- **D**  
10.50 %

**Correct Answer :D**

## Explanation

Let cost price goods be Rs. 100

Marked price (Selling Price) marked by the shopkeeper on goods = Rs. 130

He sells the goods at a discount of 15 %

Therefore,

Selling price = 85 % of Rs. 130 = Rs. 110.50

Gain = S.P. – C.P. = 110.5 – 100 = 10.50 %

**#354** [Explained](#) [Report](#) [Bookmark](#)

**A manufacturer sells a pair shoes to a wholesale dealer at a profit of 20 %. Wholesaler sells them to retailer at a profit of 25 %. The shoes are again sold to the customer for Rs. 50.50, thereby earning a profit of 30 %. Find the cost price of manufacturer.**

null

- **A**  
Rs. 20.36
- **B**  
Rs. 22.90
- **C**  
Rs. 25.89
- **D**  
Rs. 30.50

**Correct Answer :C**

## Explanation

Profit earned by manufacturer = 20 %

Profit earned by wholesaler = 25 %

Profit earned by retailer = 30%

S.P. of shoes = Rs. 50

Therefore, 130 % of 125 % of 120 % of x = 50.50

$$120/100 \times 125/100 \times 130/100 \times X = 5050/100$$

$$195/100 X = 5050/100$$

$$x = 5050 \times 100 / 195 \times 100$$

$$x = 25.89$$

Cost price of shoes = Rs. 25.89

**#355** [Explained](#) [Report](#) [Bookmark](#)

How many seconds does Puja take to cover a distance of 500 m, if she runs at a speed of 30 km/hr?

null

- **A**  
60 sec
- **B**  
82 sec
- **C**  
95 sec
- **D**  
100 sec

**Correct Answer :A**

**Explanation**

The speed 30 km per hour when converted to meters per second is 8.33. The 500 m distance can be covered in 60 seconds of continuous travel.

### #356 **Explained** **Report** **Bookmark**

A cyclist covers a distance of 800 meter in 4 minutes 20 seconds. What is the speed in km/hr of the cyclist?

null

- **A**  
6.2 km/h
- **B**  
8.4 km/hr
- **C**  
11.05 km/hr
- **D**  
16.07 km/hr

**Correct Answer :C**

## Explanation

Speed = distance/time

Convert minutes into seconds

Time=4 min 20 sec =260 sec

Speed =  $800/260 = 3.07\text{m/sec}$

Convert the speed from m/s to km/hr by multiplying with (5/18)

$$3.07 \times 18 \text{ km/hr} = 11.05 \text{ km/hr}$$

**#357** Explained Report Bookmark

A man walking at the rate of 6 km/hr crosses a bridge in 15 minutes. The length of the bridge is \_\_\_\_\_.

- **A**  
1000 m
- **B**  
1250 m
- **C**  
1500 m
- **D**  
1800 m

**Correct Answer :C**

## Explanation

To find the answer in meter, we will first convert distance from km/hour to meter/sec by multiplying it with  $\frac{5}{18}$ . Also, change 15 minutes to seconds by multiplying it with 60.

Distance = Speed x Time

Convert speed into m/sec:  $= 6 \times \frac{5}{18} = 1.66 \text{ m/s}$

Convert time from minutes into seconds  $= 15 \times 60 \text{ s} = 900 \text{ sec}$

Calculate : Distance  $= 1.66 \times 900 = 1500 \text{ m}$

**#358** Explained Report Bookmark

Two girls move in opposite directions, one from A to B and other from B to A. The girl from A reaches the destination in 16 hrs and girl from B reaches her destination in 25 hrs, after having met. If former's speed is 25 km/hr, what will be the speed of latter?

null

- **A**  
10 km/hr
- **B**  
12 km/hr
- **C**  
16 km/hr
- **D**  
20 km/hr

**Correct Answer :D**

## Explanation

If two bodies A and B move from each other's starting point in opposite directions, they reach their destinations after having met, then their speeds  $S_a$  &  $S_b$  are given by,

$$S_a/S_b = t_b/t_a$$

where  $t$  is the time taken by them to cover the distance.

$$S_b = 25 \times 4 / 5 = 20 \text{ Km/Hr}$$

**#359** Explained Report Bookmark

Two buses start at the same time, one from P to Q and the other from Q to P. If both buses reach after 4 hours and 16 hours at Q and P respectively after they cross each



other, what would be the ratio of speeds of the bus starting from P and that of the one starting from point Q?

null

- **A**  
2 : 1
- **B**  
1 : 2
- **C**  
2 : 2
- **D**  
1 : 4

**Correct Answer :A**

## Explanation

SP and SQ are speeds of two the buses at points P and Q respectively.

$t_P = 18$  hrs and  $t_Q = 4$  hrs

$$SP / SQ = 16 / 4$$

Therefore, ratio of speeds

$$SP / SQ = 4 / 2 = 2 / 1$$

One bus travels at a speed twice of the other bus.

Two towns P & Q are 275 km apart. A motorcycle rider starts from P towards Q at 8 a.m. at the speed of 25 km/hr. Another rider starts from Q towards P at 9 a.m. at the speed of 20 km/hr. Find at what time they will cross each other?

null

- **A**  
2.45 p.m.
- **B**  
2.30 p.m.
- **C**  
1.35 p.m.
- **D**  
1.15 p.m.

**Correct Answer :B**

## Explanation

Assume, distance traveled by P in x hrs = 25 x km -----(1)

distance traveled by Q in (x-1) hrs = 20 (x-1) km -----(2)

Adding (1) & (2),

$$25x + 20(x - 1) = 275$$

$$x = 6.5 \text{ hrs}$$

$$(x - 1) = (6.5 - 1) = 5.5 \text{ hrs}$$

Time at which they cross each other = 9 a.m. + 5.5hrs = 2.30 p.m.

The two motorcycle riders cross each other at 2.30 p.m.

**#361** Explained Report Bookmark

An aeroplane flying 1000 km covers the first 200 km at the rate of 200 km/hr, the second 200 km at 400 km/hr, the third 200 km at 600 km / hr & last 200 km at the rate of 800 km/hr. Determine the average speed of the aeroplane.

null

- **A**  
250 km/hr
- **B**  
300 km/hr
- **C**  
480 km/hr
- **D**  
600 km/hr

**Correct Answer :C**

## Explanation

Time = Distnace/Speed

.Total time taken =  $200/200 + 200/400 + 200/600 + 200/800 = 25/12$

Average Speed =  $(1000/12) * 12 = 480$  km/hr

**#362** Explained Report Bookmark

Jennifer travels first 4 hours of her journey at a speed of 80 miles/hr and the remaining distance in 6 hours at a speed of 30 miles/hr. What is her average speed in miles/hr?

null

- **A**  
50 miles / hr

- **B**  
60 miles / hr
- **C**  
75 miles / hr
- **D**  
92 miles / hr

**Correct Answer :A**

## Explanation

travel in 4 hours = 320 miles

And travel in 6 hours = 180 miles

total travel = 500 miles

and total time = 10 hours

so ,average speed = 50 miles / hour

**#363** [Explained](#) [Report](#) [Bookmark](#)

**A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is :**

null

- **A**  
1/4
- **B**  
1/10
- **C**  
7/15
- **D**  
8/15

Correct Answer :D

## Explanation

Let's take total work as LCM of 15 and 20,

Total work = 60 units

A finishes work in 15 days, therefore does  $60/15 = 4$  units in a day

B finishes work in 20 days, therefore does  $60/20 = 3$  units in a day

In a single day working together they finish  $= 4+3 = 7$  units

Working together for 4 days, they will finish  $= 4*7 = 28$  units

Part of work finished so far is  $= 28/\text{total work} = 28/60 = 7/15$

$\therefore \text{Remaining work} = 1 - 7/15 = 8/15$

#364 [Explained](#) [Report](#) [Bookmark](#)

If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same in 2 days, the time taken by 15 men and 20 boys in doing the same type of work will be:

null

- **A**  
4 days
- **B**  
5 days
- **C**  
6 days

- **D**  
7 days

**Correct Answer :A**

## Explanation

6 men and 8 boys can do a piece of work in 10 days

26 men and 48 boys can do the same in 2 days

As the work is done is equal,

$$10(6M + 8B) = 2(26M + 48B)$$

$$60M + 80B = 52M + 96B$$

$$\Rightarrow M = 2B$$

$$\Rightarrow B = M/2 \dots\dots(1)$$

Now Put (1) in  $15M + 20B$

$$\Rightarrow 15M + 10M = 25M$$

Now,  $6M + 8B$  in 10 days

$$\Rightarrow (6M + 4M) 10 = 100M$$

$$\text{Then } D(25M) = 100M$$

$$\Rightarrow D = 4 \text{ days.}$$

### #365 **Explained** **Report** **Bookmark**

A can do a piece of work in 4 hours; B and C together can do it in 3 hours, while A and C together can do it in 2 hours. How long will B alone take to do it?

null

- **A**  
8 hours
- **B**  
10 hours
- **C**  
12 hours
- **D**  
24 hours

**Correct Answer :C**

## Explanation

Let a,b & c be the number of days taken by A, B & C to complete the work alone.

Given, A can do a piece of work in four hours.

$$\Rightarrow 1/a = 1/4 \text{—————(1)}$$

B and C together can do it in 3 hours,

$$\Rightarrow 1/b + 1/c = 1/3 \text{————(2)}$$

A and C together can do it in 2 hours,

$$\Rightarrow 1/a + 1/c = 1/2 \text{————(3)}$$

Using (1) & (3)

$$1/c = 1/2 - 1/4 = 1/4 \text{---(4)}$$

Using (2) & (4)

$$1/b = 1/3 - 1/4 = 1/12$$

$$\Rightarrow b = 12$$

$\Rightarrow$  The number of days taken by B to complete the work alone is 12 hours.

**#366** Explained Report Bookmark

A can do a certain work in the same time in which B and C together can do it. If A and B together could do it in 10 days and C alone in 50 days, then B alone could do it in:

null

- **A**  
15 days
- **B**  
20 days
- **C**  
25 days
- **D**  
30 days

**Correct Answer :C**

## Explanation

Let a, b and c be the fraction of work per day by A,B & C respectively.



$$c = 1/50$$

$$a + b = 1/10 = 5/50 .$$

$$a = b + c .$$

Therefore,

$$2b + c = 5/50$$

$$2b = 5/50 - 1/50 = 2/25$$

$$b = 1/25$$

B will do it in 25 days.

**#367** [Explained](#) [Report](#) [Bookmark](#)

A can finish a work in 18 days and B can do the same work in 15 days. B worked for 10 days and left the job. In how many days, A alone can finish the remaining work?

null

- **A**  
5
- **B**  
5.5
- **C**  
6
- **D**  
8

**Correct Answer :C**

**Explanation**

A completes the remaining work in 6 days

A completes the work in 18 days

In one day A completes the work  $(1/18)$  th portion

B completes the work in 15 days

In one day B completes the work  $(1/15)$  th portion

In 10 days B completes the work  $[(1/15) \times 10] = (2/3)$  th portion

The remaining work is  $[1 - (2/3)] = (1/3)$

A completes the remaining work in  $[(1/3) / (1/18)] = 6$  days

**#368** [Explained](#) [Report](#) [Bookmark](#)

4 men and 6 women can complete a work in 8 days, while 3 men and 7 women can complete it in 10 days. In how many days will 10 women complete it?

null

- **A**  
35
- **B**  
40
- **C**  
45
- **D**  
50

**Correct Answer :B**

**Explanation**

$$8(4M + 6W) = 10(3M + 7W)$$

By solving this equation

$$1M = 11W$$

$$4M = 44W$$

$$44W + 6W = 50 * 8 = 10 * X$$

$$X = 40$$

**#369** [Explained](#) [Report](#) [Bookmark](#)

Find the least number, which when divided by 12, 15, 20 and 54 leaves a remainder of 8 in each case.

null

- **A**  
548
- **B**  
540
- **C**  
532
- **D**  
324

**Correct Answer :A**

## Explanation

LCM of 12, 15, 20, 54

$$12 = 2 \times 2 \times 3$$

$$15 = 3 \times 5$$

$$20 = 2 \times 2 \times 5$$

$$54 = 2 \times 3 \times 3 \times 3$$

$$\text{LCM} = 27 \times 4 \times 5 = 27 \times 20$$

$$= 540$$

ADD 8

$$= 540 + 8 = 548$$

Therefore, the answer is 548

**#370** [Explained](#) [Report](#) [Bookmark](#)

Find the least number which when divided by 5, 6, 7 and 8 leaves a remainder 3, but when divided by 9 leaves no remainder.

null

- **A**  
1963
- **B**  
2523
- **C**  
1683
- **D**  
1536

**Correct Answer :C**

## Explanation

Sum the digits of each option given. i.e

[A].  $1+6+7+7=21$  [B].  $1+6+8+3=18$

[C].  $2+5+2+3=12$  [D].  $3+3+6+3=15$

Now only 18 is divisible by 9

So the answer should be 1683 that is option B.

### #371 [Explained](#) [Report](#) [Bookmark](#)

The traffic lights at three different road crossings change after every 40 sec, 72 sec and 108 sec respectively. If they all change simultaneously at 5 : 20 : 00 hours, then find the time at which they will change simultaneously.

null

- **A**  
5 : 28 : 00 hrs
- **B**  
5 : 30 : 00 hrs
- **C**  
5 : 38 : 00 hrs
- **D**  
5 : 40 : 00 hrs

**Correct Answer :A**

## Explanation

Given that traffic light at three different road crossing change after every 48 seconds, 72 seconds and 108 seconds respectively.

$$48 = 2 \times 2 \times 2 \times 2 \times 3$$

$$72 = 2 \times 2 \times 2 \times 3 \times 3$$

$$108 = 2 \times 2 \times 3 \times 3 \times 3$$

Hence LCM of 48, 72 and 108 is  $(2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 3)$

$$= 432$$

That is after 432 seconds they will change simultaneously

$$432 \text{ seconds} = 7 \text{ min } 12 \text{ seconds}$$

Hence the lights change simultaneously at = 5:27:12

**#372** [Explained](#) [Report](#) [Bookmark](#)

A rectangular courtyard 4.55 meters long and 5.25 meters wide is paved exactly with square tiles of same size. Find the largest size of the tile used for this purpose?

null

- **A**  
25 cm
- **B**  
45 cm
- **C**  
21 cm
- **D**  
35 cm

**Correct Answer :D**

## Explanation

A courtyard 4.55 m long and 5.25 m broad is paved with square tiles of equal size. What is the largest size of the tile used?

Length of courtyard = 4.55 m = 455 cm.

Breadth of courtyard = 5.25 m = 525 cm.

To find the largest size of tile, we have to find the GCD or HCF of length 455 cm. and breadth 525 cm. Accordingly GCD/HCF

$$455 = 5 \times 7 \times 13$$

$$525 = 5 \times 7 \times 5 \times 3$$

$$\text{GCD or HCF} = 5 \times 7 = 35 \text{ cm}$$

**#373** [Explained](#) [Report](#) [Bookmark](#)

5 bells commence tolling together and toll at intervals 2, 4, 6, 8 and 10 seconds respectively. Find in 40 minutes, how many times do they toll together?

null

- **A**  
8 times
- **B**  
19 times
- **C**  
21 times
- **D**  
30 times

**Correct Answer :C**

**Explanation**

The least common multiple (LCM) of 2, 4, 6, 8, 10, and 12 is 120. Thus, the bells toll together every 120 seconds (or 2 minutes), so in 40 minutes they will toll simultaneously  $40/2 = 20$  times. However, since they commence tolling together at the beginning (i.e., they are tolling together at the 0th second or the 0th minute), we need to add 1 to 20 and thus they toll together a total of 21 times.

**#374** [Explained](#) [Report](#) [Bookmark](#)

John, Smith and Kate start at same time, same point and in same direction to run around a circular ground. John completes a round in 250 seconds, Smith in 300 seconds and Kate in 150 seconds. Find after what time will they meet again at the starting point?

null

- **A**  
30 min
- **B**  
25 min
- **C**  
20 min
- **D**  
15 min

**Correct Answer :B**

## Explanation

L.C.M. of 250, 300 and 150 = 1500 sec

Dividing 1500 by 60 we get 25, which mean 25 minutes.

John, Smith and Kate meet after 25 minutes.

**#375** [Explained](#) [Report](#) [Bookmark](#)

Find the L.C.M. of 72, 108 and 2100.



null

- **A**  
38800
- **B**  
37800
- **C**  
38880
- **D**  
37870

Correct Answer :B

## Explanation

$$72 = 2 \times 2 \times 2 \times 3 \times 3 = 2^3 \times 3^2$$

$$108 = 2 \times 2 \times 3 \times 3 \times 3 = 2^2 \times 3^3$$

$$2100 = 2 \times 2 \times 3 \times 5 \times 5 \times 7 = 2^2 \times 3 \times 5^2 \times 7$$

$$\text{LCM} = 2^3 \times 3^3 \times 5^2 \times 7 = 37800$$

**#376** **Explained** **Report** **Bookmark**

Find the L.C.M. of 16, 24, 36, 54.

null

- **A**  
432
- **B**  
426

- **C**  
428
- **D**  
434

**Correct Answer :A**

## Explanation

LCM of 16 , 24 , 36 , 54

According to prime factorization method....

$$16 = 2^4$$

$$24 = 2^3 \times 3^1$$

$$36 = 2^2 \times 3^2$$

$$54 = 2^1 \times 3^3$$

LCM ----

$$= 2^4 \times 3^3 = 16 \times 27 = 432$$

Therefore, LCM of 16 , 24 , 36 , 54 = 432

**#377** [Explained](#) [Report](#) [Bookmark](#)

A person covers a distance of 60 km from P to Q at a speed of 20 km/hr and returns from Q to P at a speed of 30 km/hr. Find the average speed of person.

null

- **A**  
22 km/hr
- **B**  
24 km/hr
- **C**  
26 km/hr
- **D**  
28.2 km/hr

**Correct Answer :B**

## Explanation

Total average speed=total dist/total time

Total distance is 120km

$$120/(60/20+60/30)=24\text{km}$$

**#378** **Explained** **Report** **Bookmark**

An express train runs at an average speed of 27 km/hr including the time of stoppage at stations. Another train runs at an average speed of 41 km/hr excluding the stoppage time at stations. Find how many minutes does a train stop in 1 hour.

null

- **A**  
20.52 min
- **B**  
15.23 min
- **C**  
12.50 min
- **D**  
10.75 min

**Correct Answer :A**

## Explanation

Train 1: Travels at an average speed of 27 km/hr

Train 2: Travels at an average speed of 41 km/hr

Therefore, train 1 lags train 2 by  $(41 - 27)$  km i.e. 14 km.

Now, we have to find the time, train 2 stops in 1 hour.

We know,  $\text{Speed} = \text{Distance} / \text{Time}$

We know, Distance = 14 km, speed = 41 km/hr

Therefore,  $\text{Time} = \text{Distance} / \text{Speed}$

$$= 14 / 41 = 0.342 \text{ hr}$$

Answer is in minutes, hence multiply by 60

$$0.342 \text{ hr} = 0.342 \times 60 = 20.52 \text{ min}$$

**#379** [Explained](#) [Report](#) [Bookmark](#)

A batsman makes a score of 80 runs in the 16th inning and increases average by 3. What is his average after 16th inning?

null

- **A**  
35
- **B**  
32

- **C**  
29
- **D**  
25

**Correct Answer :A**

## Explanation

Let in first 15 innings his average was 'x'. So, runs scored after 15 innings =  $15x$ .

In 16th inning his score is 80, so total score after 16th innings will be =  $16x + 80$ . thus average after 16 innings will be =  $(15x + 80)/16$

It is given that his overall average increases by 3, thus, we get an equation - -

$$(15x + 80)/16 = x + 3$$

$$\text{Or, } x = 32$$

So his average after 17th innings will be  $32 + 3 = 35$

**#380** [Explained](#) [Report](#) [Bookmark](#)

**In a cricket match, 6 players had an average X of their runs. Average increases by 10 runs, if seventh player makes a score of 112 runs. What is the average of first 6 players.**

null

- **A**  
36
- **B**  
39
- **C**  
40

- **D**  
42

**Correct Answer :D**

## Explanation

The average of 6 players =  $X$

Average increases by 10, when seventh player makes a score of 112 runs.

Therefore, average of 7 players =  $X + 10$

Average = Sum of Scores / Number of Players

ere, average =  $X$ , number of players = 6

Hence,

Sum of scores =  $6X$

Score of 7 players = (Score of 6 players + score of 7 player) =  $(6X + 112)$  -----  
(2)

Total average =  $(X + 10)$  ----- (3)

Substitute (2) and (3), in (1)

$(X + 10) (6X + 112) / 7$

Solving we get,

$$X = 42$$

Average of first 6 players = 42

**#381** [Explained](#) [Report](#) [Bookmark](#)

What is John's present age, if after 10 years his age will be 5 times his age 5 years back.

null

- **A**  
6.2 years
- **B**  
7.7 years
- **C**  
8.7 years
- **D**  
10 years

**Correct Answer :C**

## Explanation

Let John's present age =  $x$

After 10 years John's age =  $x + 10$

So by the above statement:

$$x + 10 = 5(x - 5)$$

$$x + 10 = 5x - 25$$

$$4x = 35$$

$$x = 8.75$$

Therefore John's present age is 8.75 years i.e. 8 years and 9 months.

**#382** [Explained](#) [Report](#) [Bookmark](#)

What will be the simple interest on Rs. 80,000 at  $16\frac{2}{3}\%$  per annum for 9 months?

null

- **A**  
8,000
- **B**  
9,000
- **C**  
10,000
- **D**  
11,000

**Correct Answer :C**

## Explanation

Principal = Rs. 80,000

Rate of interest =  $16\frac{2}{3}\% = \frac{50}{3}$

Time = 9 months or  $\frac{9}{12} = \frac{3}{4}$  years

Rate of interest =



$$\text{Simple Interest} = \frac{(P \times R \times T)}{100}$$

Substituting the given values, we get

$$\text{Simple Interest} = \frac{80000}{100} \times \frac{50}{3} \times \frac{3}{4}$$

$$\text{Simple Interest} = \text{Rs. } 10,000$$

**#383** [Explained](#) [Report](#) [Bookmark](#)

Find the simple interest on Rs. 5000 at 6 % per annum for the period from 5th Feb to 19th April, 2015.

null

- **A**  
Rs. 40
- **B**  
Rs. 50
- **C**  
Rs. 60
- **D**  
Rs. 70

**Correct Answer :C**

## Explanation

We are given:

1) Principal = Rs. 5000

2) Rate of interest = 6 %

3) Time = 5th Feb to 19th April, 2015

First find the time period 5<sup>th</sup> Feb to 19<sup>th</sup> April, 2015

Feb =  $28 - 5 = 23$  days

March = 31 days

April = 19 days

Total days =  $23 + 31 + 19 = 73$  days

Convert days into years, by dividing it by 365

Time =  $73/365 = 1/5$

Simple Interest =  $(P \times R \times T)/100$

$[5000 \times 6 \times (1/5)]/100 = 60$

Simple Interest = Rs. 60

**#384** [Explained](#) [Report](#) [Bookmark](#)

**Suresh borrows Rs. 10,000 for 2 years at 4 % p.a. simple interest. He lends it to Ramesh at 6 % p.a. for 2 years. Find his gain in this transaction per year.**

null

- **A**  
Rs. 150
- **B**  
Rs. 200
- **C**  
Rs. 400
- **D**  
Rs. 450

**Correct Answer :B**

## Explanation

Suresh has to pay a simple interest of Rs. 80 to the person from whom he borrowed Rs. 1000 and Ramesh has to pay Rs. 120 to Suresh.

Hence, gain in 2 years =  $1200 - 800 = \text{Rs. } 400$

But we are asked to find gain of Suresh per year. Therefore,

Gain in 1 year =  $400 / 2 = \text{Rs. } 200$

**#385** [Explained](#) [Report](#) [Bookmark](#)

**At what rate percent per annum will sum of money double in 20 years?**

null

- **A**  
1.2 %
- **B**  
2 %
- **C**  
4 %
- **D**  
5 %

**Correct Answer :D**

## Explanation

Let Principle = P, then S.I. = P

$$P = \frac{(P \times R \times T)}{100}$$

100

$$R = (P \times 100) / (P \times T) = 100/20 = 5 \% \text{ p.a.}$$

#386 [Explained](#) [Report](#) [Bookmark](#)

John took a loan of Rs. 1500 with simple interest for as many years as the rate of interest. If he paid Rs. 540 as interest at the end of loan period, what was the rate of interest?

null

- **A**  
2 %
- **B**  
3 %
- **C**  
4 %
- **D**  
6 %

**Correct Answer :D**

## Explanation

Simple interest is same as the rate of interest.

Hence,

Rate of interest = R% and Time = R years

$$\text{S.I.} = \frac{(P \times R \times R)}{100}$$

$$100$$

$$60 = \frac{(1500 \times R_2)}{100}$$

$$100$$

$$15R_2 = 540$$

$$R_2 = 36$$

$$R = 6 \%$$

Rate of Interest = 6 %

**#387** [Explained](#) [Report](#) [Bookmark](#)

A sum of Rs. 12,000 amounts to Rs. 15,000 in 4 years at the rate of simple interest. Find the rate of interest.

null

- **A**  
6.25 %
- **B**  
4.25 %
- **C**  
5.9 %
- **D**  
5 %

**Correct Answer :A**

## Explanation

iven,

Principle=rs.12000

Time=4 years

Amount=rs.15000

since, Amount= Principle+Simple interest

so, simple interest = amount - principle

hence, simple interest= rs.15000-12000

S.I.=rs.3000

Now,

By formula,

$$S.I.=P*R*T/100$$

$$3000=12000*R*4/100$$

$$3000*100/12000*4=R$$

$$R=25/4$$

$$R=6.25\%$$

#388 **Explained** **Report** **Bookmark**

Nikhil borrowed some money at the rate of interest 5 % p.a. for first 2 years, 8 % p.a. for next 5 years and 10 % p.a. for a period beyond 7 years. If he pays total interest of Rs. 8000 at the end of 10 years, then find the money Nikhil borrowed.

null

- **A**  
Rs. 40,000
- **B**  
Rs. 35,000
- **C**  
Rs. 25,000
- **D**  
Rs. 10,000

**Correct Answer :D**

## Explanation

We are given,

1) Nikhil borrowed some money at the rate of interest 5 % p.a. for first 2 years.

2) 8 % p.a. for next 5 years

3) 10 % p.a. for a period beyond 7 years.

4) He pays total interest of Rs. 8000 at the end of 10 years

Therefore, considering these 4 points, we can form a simple equation to find the money borrowed.

Let the principal/money borrowed be x.

$$\text{Simple Interest} = (P \times R \times T)/100$$

Total Simple Interest paid at the end 10 years= S.I.paid in 1st 2 years+S.I.paid in 1st 5 years+ S.I.paid in remaining 3 years

$$8000 = (x \times 5 \times 2)/100 + (x \times 8 \times 5)/100 + (x \times 10 \times 3)/100$$

$$8000 = (10x)/100 + (40x)/100 + (30x)/100$$

$$800000=80x$$

$$x=\text{Rs.}10,000$$

**#389** Explained Report Bookmark

A sum was put at simple interest at a certain rate for 2 years. Had it been put at 2 % higher rate, it would have fetched Rs. 400 more. Find the sum.

null



- **A**  
8000
- **B**  
9000
- **C**  
10000
- **D**  
12000

**Correct Answer :C**

## Explanation

Let sum be x.

The original rate be R.

Therefore,  $[P \times (R + 2) \times 2] / 100 - (P \times R \times 2) / 100 = 400$

$$2PR + 4P - 2PR = 40000$$

$$4P = 40000$$

$$P = \text{Rs. } 10000$$

The required sum is Rs. 10,000

**#390** **Explained** **Report** **Bookmark**

The S.I. on a certain sum of money for 4 years at 15 % per annum is Rs. 180 more than S.I. on same sum for 5 years at 10 % per annum. Find the sum.

null

- **A**  
1000
- **B**  
1200
- **C**  
1800
- **D**  
2000

**Correct Answer :C**

## Explanation

Let the sum be P.

As the S.I. on sum of money P for 4 years at 15 % is Rs. 180 more than S.I. on same sum P for 5 years at 10 %...

$$(P \times 15 \times 4)/100 - (P \times 10 \times 5)/100 = 180$$

$$6P/10 - 5P/10 = 180$$

$$P = \text{Rs. } 1800$$

The required sum is Rs. 1800

**#391** Explained Report Bookmark

The value of a sewing machine depreciates at the rate of 10 % after every year. If at the end of 3 years, its value is Rs. 8748, then find its purchase price.

null

- **A**  
10000
- **B**  
8000
- **C**  
12000
- **D**  
15000

**Correct Answer :C**

## Explanation

We are given that the value of a sewing machine depreciates at the rate of 10 % after every year. After 3 years, its value is Rs. 8748.

$P_1 = \text{Rs. } 12000$

Purchase price of the sewing machine = Rs. 12000

**#392** [Explained](#) [Report](#) [Bookmark](#)

**Find the compound interest on Rs. 5000 for 9 months at 6% per annum, if the interest is reckoned quarterly.**

null

- **A**  
Rs. 218.98
- **B**  
Rs. 228.39
- **C**  
Rs. 250.69
- **D**  
Rs. 356.50

Correct Answer :B

## Explanation

Principal = Rs. 5000, Time = 9 months = 3 quarters, Rate = 6 % per annum

Substituting the given values, we get

$$\text{Amount} = p[1 + \frac{6}{4}/100]^3$$

$$\text{Amount} = \text{Rs.} 5228.39$$

Therefore,

$$\text{Compound interest} = 5228.39 - 5000 = \text{Rs. } 228.39$$

#393 [Explained](#) [Report](#) [Bookmark](#)

Find the compound interest on Rs. 20,000 in 2 years at 4 % per annum, the interest being compounded half-yearly.

null

- **A**  
Rs. 1648.64
- **B**  
Rs. 1596.32
- **C**  
Rs. 14826.56
- **D**  
Rs. 11563.99

Correct Answer :A

## Explanation

Principal = Rs. 20000, Rate = 2 % per half-year, Time = 2 years = 4 half- years

$$\text{Amount} = 20000 \left[ 1 + \frac{2}{100} \right]^4$$

$$\text{Amount} = \text{Rs. } 21648.64$$

Compound Interest = Total amount – Principal

$$= 21648.64 - 20000$$

$$= \text{Rs. } 1648.64$$

**#394** [Explained](#) [Report](#) [Bookmark](#)

Find the compound interest on Rs. 8500 at 4 % per annum for 2 years, compounded annually.

null

- **A**  
Rs. 752.6
- **B**  
Rs. 693.6
- **C**  
Rs. 553.6
- **D**  
Rs. 593.6

**Correct Answer :B**

## Explanation

$$\text{c.i.} = p \left( 1 + \frac{r}{100} \right)^t.$$

$$\text{now a/q. } 8500 \left( 1 + \frac{4}{100} \right)^2.$$

$$8500 (1+1/25)^2.$$

$$8500 (26/25)^2.$$

$$8500.26/25.26/25.$$

$$CI=9193.6-8500=693.6$$

**#395** **Explained** **Report** **Bookmark**

An amount of Rs. 500 amounts to Rs. 583.20 in two years if compounded annually. Find the rate of interest per annum.

null

- **A**  
5.6 %
- **B**  
6 %
- **C**  
8 %
- **D**  
9.2 %

**Correct Answer :C**

## Explanation

Principal = Rs .500

Amount = rs. 583.20

Time t = 2 years

n = no. of compounds per year = 1

Formula: Substitute the values

So, rate of interest in decimal = 0.08

Rate of interest in percent =  $0.08 * 100 = 8\%$

**#396** **Explained** **Report** **Bookmark**

A certain sum amounts to Rs. 7000 in 2 years and to Rs. 8000 in 3 years. Find the sum.

null

- **A**  
Rs. 6959.37
- **B**  
Rs. 6459.37
- **C**  
Rs. 5359.37
- **D**  
Rs. 5759.37

**Correct Answer :C**

## Explanation

First we need to find out ROI for 1 year.

We can do this by using Simple Interest formula,  $SI = PRN/100$

Since SI on ₹7000 for 1 year

$$= 8000 - 7000 = ₹1000$$

Therefore,  $1000 = (7000 \times R \times 1)/100$

or  $R = 100/7 \%$

Since, the sum is the Principal amount.

& the interest is compounded yearly on the Principal for a period of 3 years, then the amount = 8000.

Therefore,  $8000 = P \times \{1 + (100/7)/100\}^3$

or  $8000 = P \times (8/7)^3$

or  $P = 5359.375$

Hence the sum is = 5359.375

**#397** [Explained](#) [Report](#) [Bookmark](#)

The difference between C.I. and S.I. on a certain sum at 10 % per annum for 2 years is Rs. 530. Find the sum.

null

- **A**  
53000
- **B**  
57500
- **C**  
69800
- **D**  
28090

**Correct Answer :A**



## Explanation

$$\text{C.I.} = 21P/100 \quad \text{Simple Interest} = (P \times R \times N)/100 = (P \times 10 \times 2)/100 = P/5$$

We are given that, the difference between C.I. and S.I. on a certain sum at 10 % per annum for 2 years is Rs. 530. Therefore,

$$\text{C.I.} - \text{S.I.} = 530$$

$$21P/100 - P/5 = 530$$

$$P = \text{Rs. } 53000$$

Hence, the required sum = Rs. 53,000

**#398** [Explained](#) [Report](#) [Bookmark](#)

If a boat travels with a speed of 10 km/hr in still water and the speed of stream is 5 km/hr, what would be the time taken by boat to go 60 km downstream?

null

- **A**  
2 hrs
- **B**  
4 hrs

- **C**  
6 hrs
- **D**  
8 hrs

**Correct Answer :B**

## Explanation

Downstream speed (Sd) = (x + y) km/hr

Time =Distance/Speed

By substituting the values of 'x' & 'y' in equation (1), we get

= 10 + 5 = 15 km/hr

We have,

Time taken by a boat to travel 60 km downstream will be equal to the ratio of distance traveled to the downstream speed.

Time taken by a boat =60/15= 4 hours

**#399** [Explained](#) [Report](#) [Bookmark](#)

**A man rows a boat at 8 km upstream in 2 hours and 2 km downstream in 40 minutes. How long will he take to reach 7 km in still water?**

null

- **A**  
2 hrs
- **B**  
4 hrs 15 min
- **C**  
6 hrs
- **D**  
7 hrs 40 min

**Correct Answer :A**

## Explanation

Speed of boat (x) =  $(1/2) \times [\text{Downstream speed}(S_d) + \text{Upstream speed}(S_u)]$

We need to know the values of upstream & downstream speeds.

Upstream Speed = Distance/Time =  $8/2 = 4$  km/hr

Downstream Speed = Distance/Time =  $2/40$  km/min =  $2/40 \times 60 = 3$  km/hr

Hence, speed of boat ( x ) =  $1/2[3 + 4] = 7/2 = 3.5$  km/hr

Thus, the time required to reach the distance of 7 km = Distance Covered/Speed of boat =  $7/3.5 = 2$  hrs

The speed of swimmer along with the flow of river is 40 km/hr and against the flow of river is 22 km/hr. What would be the speed of swimmer in still water?

null

- **A**  
11 km/hr
- **B**  
31 km/hr
- **C**  
55 km/hr
- **D**  
62 km/hr

**Correct Answer :B**

## Explanation

Speed of boat (x) =  $(1/2) \times [\text{Downstream speed}(S_d) + \text{Upstream speed}(S_u)]$

With the given parameters like  $S_D = 40 \text{ km/hr}$  &  $S_U = 22 \text{ km/hr}$ , on substituting these values in above equation, we obtain

$$x = 1/2 [S_D + S_U] = 1/2 [40 + 22] = 31 \text{ km/hr}$$

**#401** [Explained](#) [Report](#) [Bookmark](#)

For a motorboat that covers a certain distance downstream in 2 hours & returns in 3 hours, what would be its speed in still water if the speed of stream is 6 km/hr?

null

- **A**  
9 km/hr
- **B**  
15 km/hr
- **C**  
30 km/hr
- **D**  
36 km/hr

**Correct Answer :C**

## Explanation

If a boat moves to a certain distance downstream in 't1 ' hours & returns the same distance upstream in time 't2' hours,

then Speed of boat in still water =  $y(t_2 + t_1)/(t_2 - t_1)$  km/hr

With the given parameters ,  $y = 6$  km/hr,  $t_1 = 3$  hrs,  $t_2 = 2$  hrs

We can find, Speed of boat in still water  $(x) = 6 (3 + 2)/(3 - 2) = 30$  km/hr

**#402** [Explained](#) [Report](#) [Bookmark](#)

**Rahul is 15 years elder than Rohan. If 5 years ago, Rahul was 3 times as old as Rohan, then find Rahul's present age.**

null

- **A**  
32.5 years
- **B**  
27.5 years

- **C**  
25 years
- **D**  
24.9 years

**Correct Answer :B**

## Explanation

Rohan's age =  $x$

Rahul's age =  $15 + x$

5 years ago

Rohan's age =  $x - 5$

Rahul's age =  $3(x - 5)$

$$15 + x - 5 = 3x - 15$$

$$2x = 25$$

$$x = 12.5$$

Rohan's age = 12.5

Rahul's age =  $15 + 12.5 = 27.5$  years

Ajit has a certain average for 9 innings. In the tenth innings, he scores 100 runs thereby increasing his average by 8 runs. His new average is:

- **A**20
- **B**21
- **C**28
- **D**32

**Correct Answer :C**

## Explanation

Let Ajit's average be  $x$  for 9 innings. So, Ajit scored  $9x$  run in 9 innings.

In the 10<sup>th</sup> inning, he scored 100 runs then average became  $(x+8)$ . And he scored  $(x + 8) \times 10$  runs in 10 innings.

Now,

$$\Rightarrow 9x + 100 = 10 \times (x + 8)$$

$$\text{or, } 9x + 100 = 10x + 80$$

$$\text{or, } x = 100 - 80$$

$$\text{or, } x = 20$$

$$\text{New average} = (x + 8) = 28 \text{ runs}$$

The average temperature for Wednesday, Thursday and Friday was  $40^{\circ}\text{C}$ . The average for Thursday, Friday and Saturday was  $41^{\circ}\text{C}$ . If temperature on Saturday was  $42^{\circ}\text{C}$ , what was the temperature on Wednesday?

- **A**  $39^{\circ}\text{C}$
- **B**  $38^{\circ}\text{C}$
- **C**  $44^{\circ}\text{C}$
- **D**  $48^{\circ}\text{C}$

**Correct Answer :A**

## Explanation

Average temperature for Wednesday, Thursday and Friday =  $40^{\circ}\text{C}$

Total temperature =  $3 \times 40 = 120^{\circ}\text{C}$

Average temperature for Thursday, Friday and Saturday =  $41^{\circ}\text{C}$

Total temperature =  $41 \times 3 = 123^{\circ}\text{C}$

Temperature on Saturday =  $42^{\circ}\text{C}$

Now,

(Thursday + Friday + Saturday) - (Wednesday + Thursday + Friday) =  $123 - 120$ ;

Saturday - Wednesday = 3

Wednesday =  $42 - 3 = 39^{\circ}\text{C}$

**#405** [Explained](#) [Report](#) [Bookmark](#)



A bank offers 5% compound interest calculated on half-yearly basis. A customer deposits Rs. 1600 each on 1<sup>st</sup> January and 1<sup>st</sup> July of a year. At the end of the year, the amount he would have gained by way of interest is:

- **A**Rs. 120
- **B**Rs. 121
- **C**Rs. 122
- **D**Rs. 123

**Correct Answer :B**

## Explanation

**#406** **Explained** **Report** **Bookmark**

Two buses start from a bus terminal with a speed of 20 km/h at interval of 10 minutes. What is the speed of a man coming from the opposite direction towards the bus terminal if he meets the buses at interval of 8 minutes ?

- **A**3 km/h
- **B**4 km/h
- **C**5 km/h
- **D**7 km/h

**Correct Answer :C**

## Explanation

Let Speed of the man is x kmph.

Distance covered in 10 minutes at 20 kmph = distance covered in 8 minutes at (20 + x) kmph.

Or,

$$20 \times 1060 = 860 \times (20 + x)$$

$$\text{Or, } 200 = 160 + 8x$$

$$\text{Or, } 8x = 40$$

Hence,  $x = 5 \text{ kmph}$ .

Detailed Explanation:

A \_\_\_\_\_ M \_\_\_\_\_ B

A = Bus Terminal.

B = Let meeting point of first bus and the man and this distance is covered by Bus in 10 minutes. I.e. Distance A to be is covered first bus in 10 min. As AB distance can be covered by second bus in 10 minutes as well.

Distance Covered by Bus in 10 min

$$= AB = \left( \frac{20}{60} \right) \times 10 = \frac{10}{3} \text{ km.}$$

Now, M is the Meeting Point of Second Bus with Man. Man covered distance B to M in 8 minutes.

Now, Relative distance of both Man and Bus will be same as both are traveling in opposite direction of each other. Let Speed of the man =  $x$  kmph.

Relative speed =  $20 + x$

To meet at Point M, bus and Man has covered the distance (AB) in 8 minutes with relative speed. And Same AB distance is covered by bus in 10 minutes. Thus, Distance covered in 8 minutes with relative speed  $(20 + x)$  kmph = distance covered by bus in 10 minutes with speed 20 kmph.

**#407** [Explained](#) [Report](#) [Bookmark](#)

In a 729 litres mixture of milk and water, the ratio of milk to water is 7 : 2. to get a new mixture containing milk and water in the ratio 7 : 3, the amount of water to be added is:

- **A** 81 litres
- **B** 71 litres
- **C** 56 litres
- **D** 50 litres

**Correct Answer :A**

## Explanation

**#408** [Explained](#) [Report](#) [Bookmark](#)

There are eight boxes of chocolates, each box containing distinct number of chocolates from 1 to 8. In how many ways four of these boxes can be given to four persons (one boxes to each) such that the first person gets more chocolates than each of the three, the second person gets more chocolates than the third as well as the fourth persons and the third person gets more chocolates than fourth person?

- **A**35
- **B**70
- **C**105
- **D**210

**Correct Answer :B**

## Explanation

All the boxes contain distinct number of chocolates.

For each combination of 4 out of 8 boxes, the box with the greatest number has to be given to the first person, the box with the second highest to the second person and so on.

The number of ways of giving 4 boxes to the 4 person is,

$${}^8C_4 = 70$$

**#409** [Explained](#) [Report](#) [Bookmark](#)

In a railway compartment, there are 2 rows of seats facing each other with accommodation for 5 in each, 4 wish to sit facing forward and 3 facing towards the rear while 3 others are indifferent. In how many ways can the 10 passengers be seated?

- **A** 12600
- **B** 172000
- **C** 43200
- **D** 45920

**Correct Answer :C**

## Explanation

The four person who wish to sit facing forward can be seated in:  ${}^5P_4$  ways and 3 who wish to sit facing towards the rear can be seated in:  ${}^5P_3$  ways and the remaining 3 can be seated in the remaining 3 seats in  ${}^3P_3$  ways.

Total number of ways

$$= {}^5P_4 \times {}^5P_3 \times {}^3P_3$$

$$= 43200$$

**#410** [Explained](#) [Report](#) [Bookmark](#)

The cost of setting up a magazine is Rs. 2800. The cost of paper and ink etc is Rs. 80 per 100 copies and printing cost is Rs. 160 per 100 copies. In last month 2000 copies were printed but only 1500 copies could be sold at Rs. 5 each. Total 25% profit on the sale price was realized. There is one more resource of income from magazine which is advertising. What sum of money obtained from the advertising in magazine?

- **A** Rs. 1750
- **B** Rs. 2350

- **C**Rs. 1150
- **D**Rs. 1975

**Correct Answer :D**

## Explanation

Set up cost = Rs. 2800

Paper etc = Rs. 1600

Printing cost = Rs. 3200

Total cost = Rs. 7600

Total sale price =  $1500 \times 5 = 7500$

Let amount obtained from advertising be  $x$  then,

$$(7500 + x) - 7600 = 25\% \text{ of } 7500$$

$$x = 1975$$

**#411** **Explained** **Report** **Bookmark**

Find the missing number

15, 33, 69, 141, \_\_\_\_, 573, 1149

- **A**151
- **B**169
- **C**285

- **D**456

**Correct Answer :C**

## Explanation

Each number is twice the previous number with 3 added to the answer.  $15 \times 2 = 30$ ,  $30 + 3 = 33$   $33 \times 2 = 66$ ,  $66 + 3 = 69$   $69 \times 2 = 138$ ,  $138 + 3 = 141$   $141 \times 2 = 282$ ,  $282 + 3 = 285$   $285 \times 2 = 570$ ,  $570 + 3 = 573$   $573 \times 2 = 1146$ ,  $1146 + 3 = 1149$  Hence, the missing number is 285

**#412** [Explained](#) [Report](#) [Bookmark](#)

Find the solution of  $(935421 \times 625) = ?$

- **A**584638125
- **B**524896335
- **C**542879412
- **D**582365890

**Correct Answer :A**

## Explanation

try to simplify the numbers, to find the answer easily.

We are asked to multiply  $(935421 \times 625)$

625 is divisible by 5 and  $5^4 = 625$

This  $5^4$  can be written as  $(10/2)^4$

**#413** Explained Report Bookmark

If  $6 + 12 + 18 + 24 + \dots = 1800$ , then find the number of terms in the series.

- **A**21
- **B**22
- **C**23
- **D**24

Correct Answer :D

## Explanation

This is an Arithmetic Progression, in which  $x = 6$ ,  $y = 6$ , sum of terms = 1800  
Sum of  $n$  terms =  $(n/2) [2x + (n - 1)y]$  Substituting the given values, we get  $1800 = (n/2) [2 \times 6 + (n - 1)6]$  Solving we get,  $1800 = 3n (n + 1)$   $n(n + 1) = 600$   $n^2 + n = 600$   $n^2 + 25n - 24n - 600 = 0$   $(n + 25) (n - 24) = 0$  24 and -25 are the two solutions obtained. Only positive value can be considered. Hence,  $n = 24$  The number of terms in the series = 24

**#414** Explained Report Bookmark

5 years ago, sister's age was 5 times the age of her brother and the sum of present ages of sister and brother is 34 years. What will be the age of her brother after 6 years?

- **A**12 years
- **B**13.5 years
- **C**15 years
- **D**20 years

Correct Answer :C

## Explanation



Let present age of brother be  $x$  and sister's age be  $34 - x$ .

	Past Age (5 Yrs Ago)	Present Age	Future Age (After 6 Yrs)
Brother	$(x - 5)$	$x$	$(x + 6) = ?$
Sister	$(34 - x) - 5$	$(30 - x)$	

We are given, 5 years ago sister's age was 5 times the age of her brother.

Therefore,

$$(34 - x) - 5 = 5(x - 5)$$

$$34 - x - 5 = 5x - 25$$

$$5x + x = 34 - 5 + 25$$

$$6x = 54$$

$$x = 9$$

$$\text{Future age (after 6 yrs)} = (x + 6) = (9 + 6) = 15 \text{ years}$$

A man, his wife and daughter worked in a garden. The man worked for 3 days, his wife for 2 days and daughter for 4 days. The ratio of daily wages for man to women is 5 : 4 and the ratio for man to daughter is 5 : 3. If their total earnings is mounted to Rs. 105, then find the daily wage of the daughter.

- **A**Rs. 15
- **B**Rs. 12
- **C**Rs. 10
- **D**Rs. 09

**Correct Answer :D**

## Explanation

Assume that the daily wages of man, women and daughter are Rs 5x, Rs. 4x, Rs 3x respectively.

Multiply (no. of days) with (assumed daily wage) of each person to calculate the value of x.

$$[3 \times (5x)] + [2 \times (4x)] + [4 \times (3x)] = 105$$

$$[15x + 8x + 12x] = 105$$

$$35x = 105$$

$$x = 3$$

Hence, man's daily wage =  $5x = 5 \times 3 = \text{Rs. } 15$

Wife's daily wage =  $4x = 4 \times 3 = \text{Rs. } 12$

Daughter's daily wage =  $3x = 3 \times 3 = \text{Rs. } 9$

**#416** Explained Report Bookmark

If Suresh distributes his pens in the ratio of  $1/2 : 1/4 : 1/5 : 1/7$  between his four friends A, B, C and D, then find the total number of pens Suresh should have?

- **A**153
- **B**100
- **C**150
- **D**125

**Correct Answer :A**

## Explanation

Here,  $A : B : C : D = 1/2 : 1/4 : 1/5 : 1/7$

1) L.C.M of 2, 4, 5, 7 is 140

2) Find the number of pens each friend received ----- (To find no. of pens each friend has, multiply the ratio with the L.C.M. calculated)

$$A = (1/2) \times 140 = 70$$

$$B = (1/4) \times 140 = 35$$

$$C = (1/5) \times 140 = 28$$

$$D = (1/7) \times 140 = 20$$

$$3) \text{ Total number of pens} = (70x + 35x + 28x + 20x) = 153x$$

$$\text{Minimum number of pens (x)} = 1$$

Therefore, total number of pens = 153 pens.

**#417** [Explained](#) [Report](#) [Bookmark](#)

6, 12, 20, 30, 42, 54, 72, 90, 110

- [A](#)20
- [B](#)42
- [C](#)54
- [D](#)90

**Correct Answer :C**

## Explanation

$$2 \times 3 = 6, 3 \times 4 = 12, 4 \times 5 = 20, 5 \times 6 = 30, 6 \times 7 = 42, 7 \times 8 = 56, 8 \times 9 = 72$$

The numbers in the series are in order as shown above. After 42, the next number in series should be 56 instead of 54. Hence, the odd number is 54

**#418** [Explained](#) [Report](#) [Bookmark](#)

If in a race of 120m X can beat Y by 20m and Z by 35m, then Y can beat Z by:

- **A** 12m
- **B** 10m
- **C** 15m
- **D** 18m

**Correct Answer :D**

## Explanation

In a race of 120m, as X beats Y by 20m, when X runs 120m, Y runs 100m.

Similarly, as X beats Z by 35m, when X covers 120m, Z covers 85m.

Hence, when Y runs 100m, Z runs 85m.

When Y runs 120m, Z runs  $(120 * 85) / 100 = 102\text{m}$

Hence, Y beats Z by 18m.

**#419** **Explained** **Report** **Bookmark**

What day of the week was 31st July, 1993?

- **A** Monday
- **B** Sunday
- **C** Saturday
- **D** Tuesday

**Correct Answer :C**

## Explanation

31st July, 1993 = (1992 years + period from 1st January, 1993 to 31st July, 1993)

1600 years have 0 odd days and 300 years have 1 odd day.

Now, the period from 1900 to 1992 have 69 ordinary years and 23 leap years

=  $(69 \times 1 + 23 \times 2) = 115$  odd days =  $(16 \text{ weeks} + 3 \text{ days}) = 3$  odd days.

January	February	March	April	May	June	July
31	28	31	30	31	30	31

= 212 days =  $(30 \text{ weeks} + 2 \text{ days}) = 2$  odd days

Therefore, total number of odd days =  $1 + 3 + 2 = 6$  odd days.

Therefore, the required day was Saturday.

**#420** [Explained](#) [Report](#) [Bookmark](#)

A clock was set right at 2 p.m. It gains 5 seconds in 3 minutes, and it indicates 8.30 a.m. the next morning, then the true time is:

- **A** 8.00 a.m.
- **B** 7.45 a.m.
- **C** 8.15 a.m.
- **D** 7.30 a.m.

**Correct Answer :A**

## Explanation

Time elapsed from 2 p.m. to 8.30 a.m. = 18 hours 30 minutes = 1110 minutes.

Now, 3 minutes and 5 seconds of the given clock is 3 minutes of the correct clock.

Therefore, 1110 minutes of this clock is  $(1110 \times 3) / (37/12)$  minutes of the correct clock.

= 1080 minutes = 18 hours of the correct clock

Hence, the correct time is 8 a.m.

**#421** [Explained](#) [Report](#) [Bookmark](#)

Find the unit digit in the product  $(365 \times 659 \times 771)$

- **A** 1
- **B** 4
- **C** 5
- **D** 9

Correct Answer :B

## Explanation

If b is multiple of 4 Units digit is 6 : When even numbers 2, 4, 6, 8 are raised to multiple of 4. Units digit is 1 : When odd numbers 3, 7 and 9 are raised to multiple of 4. Using the hint given, we can easily solve product of large numbers.  $[3(4)16 \times 3] = (1 \times 3) = 3$   $[659] = 6$   $[771] = [7(4)17 \times 73] = [1 \times 3] = 3$  Therefore,  $(3 \times 6 \times 3) = 54$  Required unit digit is 4.

#422 [Explained](#) [Report](#) [Bookmark](#)

Two friends A and B apply for a job in the same company. The chances of A getting selected is  $\frac{2}{5}$  and that of B is  $\frac{4}{7}$ . What is the probability that both of them get selected?

- **A**  $\frac{8}{35}$
- **B**  $\frac{34}{35}$
- **C**  $\frac{27}{35}$
- **D** None of these

Correct Answer :A

## Explanation

$$P(A) = \frac{2}{5}$$

$$P(B) = \frac{4}{7}$$

$$E = \{A \text{ and } B \text{ both get selected}\}$$

$$P(E) = P(A) \cdot P(B)$$

$$= \frac{2}{5} \cdot \frac{4}{7}$$



$$= 8/35$$

#423 [Explained](#) [Report](#) [Bookmark](#)

Find the missing number

15, 33, 69, 141, \_\_\_\_, 573, 1149

- [A](#)151
- [B](#)169
- [C](#)285
- [D](#)456

Correct Answer :C

## Explanation

Each number is twice the previous number with 3 added to the answer.  $15 \times 2 = 30$ ,  $30 + 3 = 33$   $33 \times 2 = 66$ ,  $66 + 3 = 69$   $69 \times 2 = 138$ ,  $138 + 3 = 141$   $141 \times 2 = 282$ ,  $282 + 3 = 285$   $285 \times 2 = 570$ ,  $570 + 3 = 573$   $573 \times 2 = 1146$ ,  $1146 + 3 = 1149$  Hence, the missing number is 285

#424 [Explained](#) [Report](#) [Bookmark](#)

he mean of 40 observations was 46. Later on it was found that an observation 38 was wrongly taken as 33. find the corrected value of mean.

- [A](#)40.23
- [B](#)42.36
- [C](#)46.12
- [D](#)51.23

Correct Answer :C

## Explanation

#425 [Explained](#) [Report](#) [Bookmark](#)

A man rows a boat at 8 km upstream in 2 hours and 2 km downstream in 40 minutes. How long will he take to reach 7 km in still water?

- [A](#) 2 hrs
- [B](#) 4 hrs 15 min
- [C](#) 6 hrs
- [D](#) 7 hrs 40 min

Correct Answer :A

## Explanation

#426 [Explained](#) [Report](#) [Bookmark](#)

The average of four consecutive even numbers is 27. Find the largest of these numbers.

- [A](#) 28
- [B](#) 30
- [C](#) 32
- [D](#) 34

Correct Answer :B

## Explanation

**#427** Explained Report Bookmark

Which of the following year is not a leap year?

- **A**1960
- **B**2080
- **C**2024
- **D**2100

Correct Answer :D

## Explanation

The two conditions that decide that a year is a leap year or not is: • For a year to be a leap year, it should be divisible by 4. • No century is a leap year unless it is divisible by 400. Hence, the year 2100 is not a leap year as it is not divisible by 400.

**#428** Explained Report Bookmark

In a farm, along with 50 hens, there were 45 goats and 8 horses and some farmers. If total number of feet be 224 more than number of heads, then find the number of farmers.

- **A**11
- **B**15
- **C**16
- **D**18

Correct Answer :B

## Explanation

Let's the number of farmers be  $y$ . Step 1: Find number of heads =  $(50 \text{ hens} + 45 \text{ goats} + 8 \text{ horses} + y \text{ farmers}) = (103 + y)$  Step 2: Number of feet =  $[(\text{Hens } 2 \times 50) + (45 \times 4) + (8 \times 4) + (y \times 2)] = [100 + 180 + 32 + 2y] = 312 + 2y$  Step 3: Find number of farmers  $(312 + 2y) - (103 + y) = 224$   $312 + 2y - 103 - y = 224$   $y = 15$   
 Number of farmers = 15

**#429** [Explained](#) [Report](#) [Bookmark](#)

Find which of the following number is divisible by 11?

- **A** 246542
- **B** 415624
- **C** 146532
- **D** 426513

**Correct Answer :B**

## Explanation

Number divisible by 11: If the difference between the sums of the digits at even places and the sum of digits at odd places is either 0 or divisible by 11. Using the hint, we can easily find the number which is divisible by 11. Option a) 246542  
 Sum of digits at even places =  $(2 + 6 + 4) = 12$  Sum of digits at odd places =  $(4 + 5 + 2) = 11$  Sum of digits at even places - Sum of digits at odd places =  $(12 - 11) = 1$  Hence, the number is not divisible by 11 Option b) 415624 Sum of digits at even places =  $(4 + 5 + 2) = 11$  Sum of digits at odd places =  $(1 + 6 + 4) = 11$  Sum of digits at even places - Sum of digits at odd places =  $(11 - 11) = 0$  Hence, the number is divisible by 11 Option c) 146532 Sum of digits at even places =  $(1 + 6 + 3) = 10$  Sum of digits at odd places =  $(4 + 5 + 2) = 11$  Sum of digits at even places - Sum of digits at odd places =  $(10 - 11) = -1$  Hence, the number is not divisible by 11

**#430** [Explained](#) [Report](#) [Bookmark](#)

Three numbers are in the ratio 3:4:5. The sum of their squares is Rs 1250. What is the sum of numbers?

- **A**40
- **B**50
- **C**60
- **D**90

**Correct Answer :C**

## Explanation

Let the three numbers be  $3x$ ,  $4x$  and  $5x$ . Sum of the squares of these = 1250 A/q,  
 $\Rightarrow (3x)^2 + (4x)^2 + (5x)^2 = 1250 \Rightarrow 9x^2 + 16x^2 + 25x^2 = 1250 \Rightarrow 50x^2 = 1250 \Rightarrow x^2 = 1250/50 \Rightarrow x^2 = 25 \Rightarrow x = 5$ . Therefore, three numbers are :-  $\Rightarrow 3x = 3(5) = 15$   
 $\Rightarrow 4x = 4(5) = 20 \Rightarrow 5x = 5(5) = 25$  Now, Sum of these numbers =  $15 + 20 + 25 \Rightarrow 60$ .

**#431** **Explained** **Report** **Bookmark**

Ages of two persons differ by 16 years. If 6 year ago, the elder one be 3 times as old the younger one, find their present age

- **A**12,28
- **B**14,30
- **C**16,32
- **D**18,34

**Correct Answer :B**

## Explanation

Let the age of younger person is  $x$ ,

Then elder person age is  $(x+16)$

$$\Rightarrow 3(x-6) = (x+16-6) \text{ [6 years before]}$$

$$\Rightarrow 3x-18 = x+10$$

$$\Rightarrow x = 14.$$

So other person age is  $x + 16 = 30$

**#432** [Explained](#) [Report](#) [Bookmark](#)

Find a positive number which when increased by 17 is equal to 60 times the reciprocal of the number

- **A**17
- **B**15
- **C**08
- **D**03

**Correct Answer :D**

## Explanation

If the number is  $x$ ,

$$\text{Then, } x + 17 = 60/x$$

$$x^2 + 17x - 60 = 0$$

$$(x + 20)(x - 3) = 0$$

$x = 3, -20$ , so  $x = 3$  (as 3 is positive)

**#433** [Explained](#) [Report](#) [Bookmark](#)

A mixture of 15 litres consists of 20% alcohol and rest is water. If 3 more litres of water are added to the mixture, what will be the percentage of alcohol in new mixture?

- **A** 15%
- **B** 15.75%
- **C** 16.66%
- **D** 17%

**Correct Answer :C**

## Explanation

80% of 15 ltrs = 12 ltrs after addition of extra three ltrs total quantity becomes 18 ltrs and new percentage of water becomes  $(12+3/18) = 0.8333$  ie 83.333% so new percentage of alcohol is  $100-83.33=16.667$

**#434** [Explained](#) [Report](#) [Bookmark](#)

Two pipes A and B can fill a tank in 6 hours and 4 hours respectively. They are opened for alternate hours starting with pipe A. How long will it take to fill the tank?

- **A** 4 hrs
- **B** 5 hrs

- **C** 5.5 hrs
- **D** 6 hrs

Correct Answer :B

## Explanation

#435 **Explained** **Report** **Bookmark**

Taps A and B can fill a bucket in 12 minutes and 15 minutes respectively. If both are opened and A is closed after 3 minutes, how much further time would it take for B to fill the bucket?

- **A** 8 min 15 sec
- **B** 7 min 15 sec
- **C** 6 min 15 sec
- **D** 5 min 15 sec

Correct Answer :A

## Explanation

#436 **Explained** **Report** **Bookmark**

An industrial loom weaves 0.128 metres of cloth every second.  
Approximately, how many seconds will it take for the loom to weave 25 metre of cloth ?



- **A** 194 seconds
- **B** 195 seconds
- **C** 196 seconds
- **D** 197 seconds

Correct Answer :B

## Explanation

#437 [Explained](#) [Report](#) [Bookmark](#)

The length of a train is 110 metres. It is running at the speed of 72 kmph. How much will it take to cross a bridge 132 m in length?

- **A** 9.8 sec
- **B** 12.1 sec
- **C** 12.42 sec
- **D** 14 sec

Correct Answer :B

## Explanation

$$d=(110+132)\text{m} \quad v=72 \times \frac{5}{18}=20 \text{ m/s} \quad t=d/v = 242/20 = 12.1 \text{ sec}$$

#438 [Explained](#) [Report](#) [Bookmark](#)

A book was sold for Rs 27.50 with a profit of 10%. If it were sold for Rs. 25.75, then would have been percentage of profit and loss ?

- **A** 2% Profit

- **B** 3% Profit
- **C** 2% Loss
- **D** 3% Loss

Correct Answer :B

## Explanation

#439 [Explained](#) [Report](#) [Bookmark](#)

A cistern can be filled in 9 hours but due to a leak at its bottom it takes 10 hours. If the cistern is full, then the time that the leak will take to make it empty will be ?

- **A** 20 hours
- **B** 19 hours
- **C** 90 hours
- **D** 80 hours

Correct Answer :C

## Explanation

Part filled without leak in 1 hour =  $\frac{1}{9}$

Part filled with leak in 1 hour =  $\frac{1}{10}$

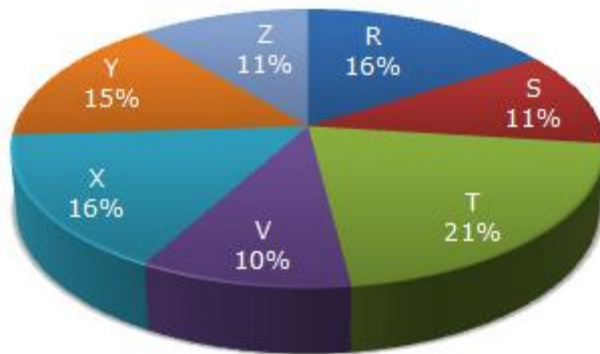
Work done by leak in 1 hour =  $[ ( \frac{1}{9} ) - ( \frac{1}{10} ) ] = \frac{1}{90}$

We used subtraction as it is getting empty.

So total time to empty the cistern is 90 hours

#440 [Explained](#) [Report](#) [Bookmark](#)

If the population of village R in 1997 is 32000, then what will be the population of village Y below poverty line in that year?



Village	% Population Below Poverty Line
---------	---------------------------------

X	38
---	----

Y	52
---	----

Z	42
---	----

R            51

S            49

T            46

V            58

- **A**  
14100
- **B**  
15600
- **C**  
16500
- **D**  
17000

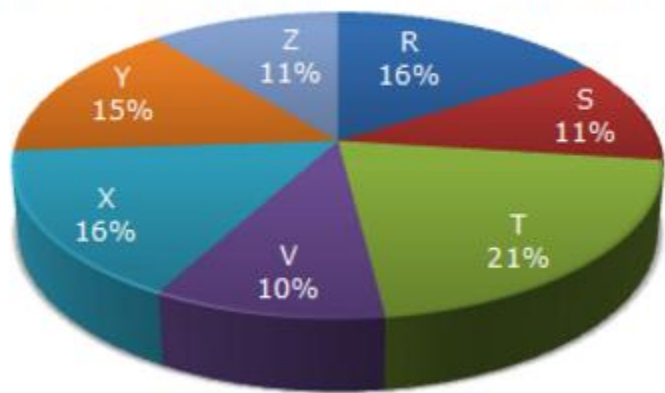
Correct Answer :B

## Explanation

Population of village R = 32000(given). Let the population of village Y be y.  
Then,  $16:15 = 32000:y \Rightarrow y = (15 * 32000)/16 = 30000$  Population of village Y  
below poverty line = 52% of 30000 = 15600.

The ratio of population of village T below poverty line to that of village Z below poverty line in 1997 is

Proportion of Population of Seven Villages in 1997



:

Village	% Population Below Poverty Line
X	38
Y	52
Z	42
R	51
S	49

T 46

V 58

- **A**  
11:23
- **B**  
13:11
- **C**  
23:11
- **D**  
11:13

Correct Answer :C

## Explanation

Let N be the total population of all the seven villages.

Then, population of village T below poverty line = 46% of (21% of N) and  
population of village Z below poverty line 42% of (11% of N) Required ratio

$$= [46\% \text{ of } (21\% \text{ of } N)]/[42\% \text{ of } (11\% \text{ of } N)] = (46 * 21)/(42 * 11) = 23/11.$$

#442 **Explained** **Report** **Bookmark**

Simplify

$$3034 - (1002 \div 20.04) = ?$$

- **A** 1964
- **B** 1984
- **C** 2964
- **D** 2984

Correct Answer :D

## Explanation

$$= 3034 - [(1002/20.04) \times 100]$$

$$= 3034 - 50$$

$$= 2984$$

#443 [Explained](#) [Report](#) [Bookmark](#)

How many terms are there in 2,4,8,16,....,1024

- **A**  
7
- **B**  
8
- **C**  
9
- **D**  
10

Correct Answer :D

## Explanation

**Given:**

**2, 4, 8, 16, ....., 1024**

**Formula used:**

**Geometric Progression(G.P)**

**$a, ar, ar^2, ar^3, \dots, ar^{n-1}$**

**$T_n = ar^{n-1}$**

**$T_n = \text{last term}, a = \text{first term}, r = T_n/T_{n-1}$**

**Calculation:**

**According to the question,**

**$a = 2, r = 4/2 = 2$  and  $T_n = 1024$**

$$\Rightarrow 1024 = 2 \times 2^{n-1}$$

$$\Rightarrow 2^{n-1} = 512$$

$$\Rightarrow 2^{n-1} = 2^9$$

**Base is same then**



$$\Rightarrow n - 1 = 9$$

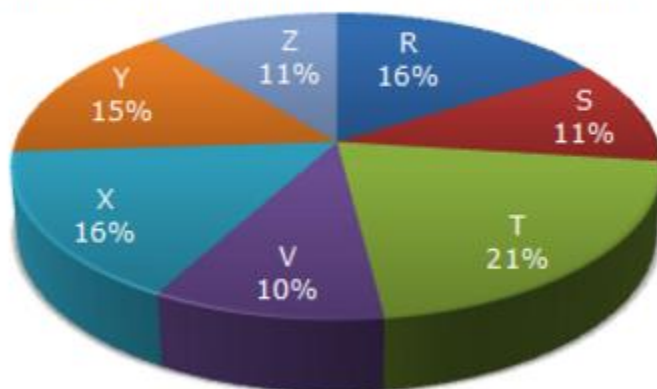
$$\Rightarrow n = 10$$

$\therefore$  The number of term is 10.

#### #444 [Explained](#) [Report](#) [Bookmark](#)

If in 1998, the population of village Y and V increase by 10% each and the percentage of population below the poverty line remains unchanged for all the villages, then find the population of village V below the poverty line in 1998, given that the population of village Y in 1997 was 30000.

Proportion of Population of Seven Villages in 1997



- **A**  
11250
- **B**  
12760
- **C**  
13140
- **D**  
13780

Correct Answer :B

## Explanation

Population of village Y in 1997 = 30000(given)

Let the population of village V in 1997 be  $v$ .

Then,  $15:10 = 30000:v \Rightarrow v = (30000 * 10)/15 = 20000$

Now, population of village V in 1998 =  $20000 + (10\% \text{ of } 20000) = 22000$ .

Population of village V below poverty line in 1998 =  $58\% \text{ of } 22000 = 12760$ .

#445 [Explained](#) [Report](#) [Bookmark](#)

The number of girls in a class are 7 times the number of boys, which value can never be the of total students

- **A**40
- **B**48
- **C**24
- **D**30

Correct Answer :D

## Explanation

Let the boys are  $X$ , then girls are  $7X$ , total =  $X+7X = 8X$

So it should be multiple of 8, 30 is not a multiple of 8.

#446 [Explained](#) [Report](#) [Bookmark](#)

Find the population of village S if the population of village X below poverty line in 1997 is 12160.

- [A](#)18500
- [B](#)20500
- [C](#)22000
- [D](#)26000

Correct Answer :C

## Explanation

Let the population of village X be  $x$ . Then,  $38\%$  of  $x = 12160 \Rightarrow x = (12160 * 100)/38 = 32000$  Now, if  $s$  be the population of village S, then  $16 : 11 = 32000 : s \Rightarrow s = (11 * 32000)/16 = 22000$ .

#447 [Explained](#) [Report](#) [Bookmark](#)

If in 1999, the population of village R increased by 10% while that of village Z reduces by 5% compared to that in 1997 and the percentage of population below poverty line remains unchanged for all the villages, then find the approximate ratio of population of village R below poverty line to the ratio of population of village Z below poverty line for the year 1999.

- [A](#)2:1
- [B](#)3:2
- [C](#)4:3
- [D](#)5:4

Correct Answer :A

## Explanation

Let the total population of all the seven villages in 1997 be  $N$ . Then, population of village R in 1997 = 16% of  $N = 16/100 N$  and population of village Z in 1997 = 11% of  $N = 11/100 N$ . Population of village R in 1999 =  $\{16/100 N + (10\% \text{ of } 16/100 N)\} = 1760/10000 N$  and population of village Z in 1999 =  $\{11/100 N - (5\% \text{ of } 11/100 N)\} = 1045/10000 N$ . Now, population of village R below poverty line for 1999 = 51% of  $(1760/10000 N)$  and population of village Z below poverty line for 1999 = 42% of  $(1045/10000 N)$ . Required ratio =  $[51\% \text{ of } (1760/10000 N)]/[42\% \text{ of } (1045/10000 N)] = (51 * 1760)/(42 * 1045) \approx 2/1$

#448 [Explained](#) [Report](#) [Bookmark](#)

What is the largest 4 digit number exactly divisible by 88

- [A](#)9900
- [B](#)9999
- [C](#)9988
- [D](#)9944

Correct Answer :D

## Explanation

Largest 4 digit number is 9999

After doing  $9999 \div 88$  we get remainder 55

Hence largest 4 digit number exactly divisible by 88 =  $9999 - 55 = 9944$

#449 [Explained](#) [Report](#) [Bookmark](#)

**Simplify**

$$(31/10) * (3/10) + (7/5) / 20$$

- **A**0
- **B**1
- **C**10
- **D**100

**Correct Answer :B**

## **Explanation**

$$= (31/10) * (3/10) + (7/5) / 20$$

$$= (3.1) * (.3) + (1.4) / 20$$

$$= 0.93 + 0.07$$

$$= 1$$

**#450** **Explained** **Report** **Bookmark**

**A river is flowing at 2 kmph. It takes a man twice as long to row up as, to row down the river. What is the rate (in km/hr) of the man in still water ?**

- **A**2
- **B**4
- **C**6
- **D**8

**Correct Answer :C**

## **Explanation**

Let, speed of boat man be  $x$  kmph. So, speed in down stream  $= (x+2)$  kmph. and speed in up-stream  $= (x-2)$  kmph. Since, distance is constant for both case , the equation  $= 2(x-2) = (x+2)$  or  $2x-4 = x+2$  or  $x= 6$  kmph

#451 [Explained](#) [Report](#) [Bookmark](#)

A watch which gains uniformly is 2 minutes low at noon on Monday and is 4 min. 48 sec fast at 2 p.m. on the following Monday. When was it correct ?

- **A** 2 p.m. on Tuesday
- **B** 1 p.m. on Friday
- **C** 3 p.m. on Thursday
- **D** 2 p.m. on Wednesday

Correct Answer :D

## Explanation

Time from 12 p.m. on Monday to 2 p.m. on the following Monday = 7 days 2 hours = 170 hours. The Watch gains  $(2+445)$  min. or 345 min.in 170 hrs. Now, 345min.are gained in 170 hrs. 2 min.are gained in  $(170 \times 534 \times 2)$  hrs=50 hrs Watch is correct 2 days 2 hrs. after 12 p.m. on Monday i.e., it will be correct at 2 p.m. on Wednesday

#452 [Explained](#) [Report](#) [Bookmark](#)

When in each box 6 or 8 dozens of oranges were packed, five dozens were remaining. Therefore, bigger boxes were taken to pack 9 or 10 dozens of oranges. However still five dozens of oranges remains. What was the least number of dozens of oranges to be packed ?

- **A** 288
- **B** 360

- **C**365
- **D**435

Correct Answer :C

## Explanation

LCM of 6,8,9 and 10 is 360. So, total numbers of dozens of oranges are 360 +5 = 365

#453 **Explained** **Report** **Bookmark**

In what proportion should a milkman mix milk at Rs.2.40 per litre and Rs.3.60 per litre to make a mixture worth Rs.2.50 per litre ?

- **A**5: 17
- **B**1:11
- **C**11:1
- **D**2:3

Correct Answer :C

## Explanation

2.40 3.60 2.50 3.60 - 2.50 2.50 - 2.40 = 1.10 10 So, Ratio will be 11 : 1.

#454 **Explained** **Report** **Bookmark**

The speed of a car increases by 2 km after every hour. If the distance travelled in the first hour was 35 km. What was the total distance travelled in 12 hours ?

- **A**456 km
- **B**482 km
- **C**548 km

- **D**552 km

Correct Answer :D

## Explanation

Given, the first term,  $a = 35$ , common difference,  $d = 2$  and total number of terms,  $(n) = 12$ . The sum of this series will be the total distance travelled.  
Sum,  $S_n = \frac{n}{2}[2a + (n - 1) d] = \frac{12}{2} [70 + 11 \times 2] = 6 [70 + 22] = 6 \times 92 = 552 \text{ km}$ .

#455 [Explained](#) [Report](#) [Bookmark](#)

In how many different ways can the letters of the word 'PREVIOUS' be arranged in such a way that the vowels always come together?

- **A**2420
- **B**2880
- **C**3260
- **D**4840

Correct Answer :B

## Explanation

Treating the group of four vowels (E, I O and U) as one distinct letter then total number of letters will be  $8 - 4 + 1 = 5$  [i.e. P, R, V, S and (E, I, O, U)]. The five letters can be arranged in  $5! = 120$  ways. The vowels among themselves can be arranged in  $4! = 24$  ways. The letters of the word 'PREVIOUS' can be arranged in  $120 \times 24 = 2880$  ways such that vowels always come together.

#456 [Explained](#) [Report](#) [Bookmark](#)



simplify

$$23 \times 15 \div 25 + 48.2 = -35 + ?$$

- **A**97
- **B**98
- **C**95
- **D**96

Correct Answer :A

## Explanation

Use BODMAS

#457 [Explained](#) [Report](#) [Bookmark](#)

Two partners invested Rs.20,000 and Rs.12,000 respectively in a business.They distribute 75% of the profit equally and distribute the rest 25% according to the ratio of their investment of capitals. If the bigger partner received Rs.400 more than the other, then what is the total profit ?

- **A**Rs.5280
- **B**Rs.5600
- **C**Rs.6240
- **D**Rs.6400

Correct Answer :D

## Explanation

Since, 75% of the profit is distributed equally ,rest 25% should be distributed according to their ratio of investment. Actual, ratio of capital =

$20000:12000 = 5:3$   $\frac{5}{8} - \frac{3}{8} = \frac{2}{8} = \frac{1}{4} = \frac{400}{1000}$  or  $\frac{2}{8} = \frac{1}{4} = \frac{400}{1000}$  or  $1 = 4 \times 400 = 1600$  i.e. 25% So, total profit =  $400 \times 4 \times (\frac{1}{25}) \times 100 = 6400$

#458 [Explained](#) [Report](#) [Bookmark](#)

A sum of money at compound interest amounts to thrice itself in three years. In how many years will it be nine times itself ?

- **A** 4 years
- **B** 6 years
- **C** 8 years
- **D** 12 years

Correct Answer :B

## Explanation

Let, principal be x. It will be 3x after 3 years. 3x will take another 3 years.  
So, total time taken =  $3+3 = 6$  years. Short-cut method:  $x \rightarrow 3x$  in 3 years  
 $3x \rightarrow 9x$  i.e.  $(3x)^2 = 3 \times 2 = 6$  years.

#459 [Explained](#) [Report](#) [Bookmark](#)

A person invested an amount of Rs. 13,900 divided in two different schemes A and B at the simple interest rate of 14% p.a. and 11% p.a. respectively. If the total amount of simple interest earned in 2 years be Rs. 3508, what was the amount invested in Scheme B ?

- **A** Rs.6400
- **B** Rs.6500
- **C** Rs.7200
- **D** Rs.7500

Correct Answer :A

## Explanation

Let the sum invested in Scheme A be Rs.  $x$  and that in Scheme B be Rs.  $(13900 - x)$ . Then,  $(x \times 14 \times 2)/100 + ((13900 - x) \times 11 \times 2)/100 = 3508$   
 $28x - 22x = 350800 - (13900 \times 22)$  or  $6x = 45000$  or  $x = 7500$ . So, sum invested in Scheme B = Rs.  $(13900 - 7500) = \text{Rs. } 6400$ .

#460 [Explained](#) [Report](#) [Bookmark](#)

Age of mother 10 years ago was 3 times the age of her son. After 10 years, mother's age will be twice that of his son. Find the ratio of their present ages.

- **A** 11 : 7
- **B** 9 : 5
- **C** 7 : 4
- **D** 7 : 3

Correct Answer :D

## Explanation

We are given that, age of mother 10 years ago was 3 times the age of her son

So, let age of son be  $x$  and as mother's age is 3 times the age of her son, let it be  $3x$ , three years ago.

At present: Mother's age will be  $(3x + 10)$  and son's age will be  $(x + 10)$

After 10 years: Mother's age will be  $(3x + 10) + 10$  and son's age will be  $(x + 10) + 10$

Mother's age is twice that of son

$$(3x + 10) + 10 = 2 [(x + 10) + 10]$$

$$(3x + 20) = 2[x + 20]$$

Solving the equation, we get  $x = 20$

We are asked to find the present ratio.

$$(3x + 10) : (x + 10) = 70 : 30 = 7 : 3$$

#461 [Explained](#) [Report](#) [Bookmark](#)

Find the three consecutive odd numbers whose sum of the squares is 2531.

- [A](#) 19, 21, 23
- [B](#) 23, 25, 27
- [C](#) 27, 29, 31
- [D](#) 31, 33, 35

Correct Answer :C

## Explanation

Let three consecutive odd numbers be  $x$ ,  $x+2$ ,  $x+4$ .  $x^2 + (x+2)^2 + (x+4)^2 = 2531$   
 Simplifying we get,  $x^2 + 4x - 837 = 0$   $27 \times 31 = 837$  and also the difference between 27 and 31 is 4 Therefore,  $x^2 + 31x - 27x - 837 = 0$   $(x + 31)(x - 27) = 0$   $X = 27$   
 or  $x = -31$  Hence, the value of  $x = 27$   $(x+2) = 27 + 2 = 29$   $(x+4) = 27 + 4 = 31$

#462 [Explained](#) [Report](#) [Bookmark](#)

The traffic lights at three different road crossings change after every 40 sec, 72 sec and 108 sec respectively. If they all change simultaneously at 5 : 20 : 00 hours, then find the time at which they will change simultaneously.

- **A** 5 : 28 : 00 hrs
- **B** 5 : 30 : 00 hrs
- **C** 5 : 38 : 00 hrs
- **D** 5 : 40 : 00 hrs

Correct Answer :B

## Explanation

Traffic lights at three different road crossings change after every 40 sec, 72 sec and 108 sec respectively. Therefore, find the L.C.M. of 40, 72 and 108. L.C.M. of 40, 72 and 108 = 1080 The traffic lights will change again after 1080 seconds = 18 min The next simultaneous change takes place at 5 : 38 : 00 hrs.

#463 [Explained](#) [Report](#) [Bookmark](#)

Find the missing number in given series

15, 33, 69, 141, \_\_\_\_, 573, 1149

- **A** 151
- **B** 169
- **C** 285
- **D** 456

Correct Answer :C

## Explanation

Each number is twice the previous number with 3 added to the answer.  $15 \times 2 = 30$ ,  $30 + 3 = 33$ ,  $33 \times 2 = 66$ ,  $66 + 3 = 69$ ,  $69 \times 2 = 138$ ,  $138 + 3 = 141$ ,  $141 \times 2 = 282$ ,  $282 + 3 = 285$ ,  $285 \times 2 = 570$ ,  $570 + 3 = 573$ ,  $573 \times 2 = 1146$ ,  $1146 + 3 = 1149$ . Hence, the missing number is 285

#464 [Explained](#) [Report](#) [Bookmark](#)

Pooja is twice as efficient as Aarti and takes 90 days less than Aarti to complete the job. Find the time in which they can finish the job together.

- **A** 30 days
- **B** 45 days
- **C** 60 days
- **D** 90 days

Correct Answer :C

## Explanation

Assume that Pooja completes the job in 'x' days.

So, Aarti will take '2x' days to complete the same job.

As Pooja takes 90 days less than Aarti, we get

$$x = 2x - 90$$

By solving this equation, we get  $x = 90$ .

$$\text{Thus, } 2x = 2 \times 90 = 180$$

Part of job done by Pooja in 1 day =  $1/90$

Part of job done by Aarti in 1 day =  $1/180$

(Part of job done together in 1 day) = (Part of job done by Pooja in 1 day) +  
(Part of job done by Aarti in 1 day)

$$= (1/90) + (1/180)$$

$$= 3/180$$

$$= 1/60$$

$(1/60)$ th part of whole job will be completed by Pooja and Aarti together in one day.

Therefore, the whole job will be completed in 60 days together.

#465 [Explained](#) [Report](#) [Bookmark](#)

Two buses start at the same time, one from P to Q and the other from Q to P. If both buses reach after 4 hours and 16 hours at Q and P respectively after they cross each other, what would be the ratio of speeds of the bus starting from P and that of the one starting from point Q?

- **A** 2 : 1
- **B** 1 : 2
- **C** 2 : 2
- **D** 1 : 4

Correct Answer :A

## Explanation

#466 [Explained](#) [Report](#) [Bookmark](#)

Find the sum of two numbers, which are greater than 29 and have H.C.F. and L.C.M. of 29 and 4147 respectively

- **A**858
- **B**696
- **C**1050
- **D**4147

Correct Answer :B

## Explanation

Product of two numbers = Product of their H.C.F. and L.C.M. Product of two numbers =  $29 \times 4147 = 120263$  Given: Two numbers are greater than 29. Therefore, let the two numbers be  $29x$  and  $29y$ . So,  $29x \times 29y = 120263$   $xy = 143$  Factors of 143 are: 1, 11, 13, and 143 Case: 1) If we consider factors of 143 as 1 and 143 (co-primes), then we get the value of two numbers  $x$  and  $y = (29 \text{ and } 4147)$  ----- (Which is wrong: As it is given that, the numbers are greater than 29) Case: 2) If we consider factors of 143 as 11 and 13 (co-primes), then we get the value of two numbers  $x$  and  $y = (319, 377)$  ----- (These two values are greater than 2. So, it is the correct answer) Therefore, the two numbers are 319 and 377. Sum of two numbers =  $319 + 377 = 696$

#467 [Explained](#) [Report](#) [Bookmark](#)



Two friends A and B apply for a job in the same company. The chances of A getting selected is  $\frac{2}{5}$  and that of B is  $\frac{4}{7}$ . What is the probability that both of them get selected?

- **A**  $\frac{8}{35}$
- **B**  $\frac{34}{35}$
- **C**  $\frac{27}{35}$
- **D** None of these

Correct Answer :A

## Explanation

$$P(A) = \frac{2}{5}$$

$$P(B) = \frac{4}{7}$$

$$E = \{A \text{ and } B \text{ both get selected}\}$$

$$P(E) = P(A) \cdot P(B)$$

$$= \frac{2}{5} \cdot \frac{4}{7}$$

$$= \frac{8}{35}$$

#468 [Explained](#) [Report](#) [Bookmark](#)

Find the wrong number in the series

9, 12, 17, 20, 25, 28, 34, 36, 41

- **A** 25
- **B** 28

- **C**34
- **D**41

Correct Answer :C

## Explanation

Here, the differences between two successive numbers from the beginning are 3, 5, 3, 5... 34 is the wrong term because the next number should have the difference of 5 i.e. the number should be 33. Hence, the odd number is 34

#469 [Explained](#) [Report](#) [Bookmark](#)

Two towns P & Q are 275 km apart. A motorcycle rider starts from P towards Q at 8 a.m. at the speed of 25 km/hr. Another rider starts from Q towards P at 9 a.m. at the speed of 20 km/hr. Find at what time they will cross each other?

- **A**2.45 p.m.
- **B**2.30 p.m.
- **C**1.35 p.m.
- **D**1.15 p.m.

Correct Answer :B

## Explanation

We have read, relative speed between two bodies moving in opposite direction:  $S_R = S_1 + S_2$

Assume, distance traveled by P in x hrs = 25 x km -----(1)

distance traveled by Q in  $(x-1)$  hrs =  $20(x-1)$  km -----(2)

Adding (1) & (2),

$$25x + 20(x-1) = 275$$

$$x = 6.5 \text{ hrs}$$

$$(x-1) = (6.5-1) = 5.5 \text{ hrs}$$

Time at which they cross each other = 9 a.m. + 5.5hrs = 2.30 p.m.

The two motorcycle riders cross each other at 2.30 p.m.

#470 [Explained](#) [Report](#) [Bookmark](#)

Tickets numbered 1 to 50 are mixed and one ticket is drawn at random. Find the probability that the ticket drawn has a number which is a multiple of 4 or 7?

- **A**  
9/25

- **B**  
9/50
- **C**  
18/25
- **D**  
None of these

Correct Answer :A

## Explanation

$S = \{1, 2, 3, \dots, 49, 50\}$   $E = \{4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 7, 14, 21, 35, 42, 49\}$   
 $n(S) = 50$   $n(E) = 18$   $P(E) = n(E)/n(S) = 18/50 = 9/25$

#471 [Explained](#) [Report](#) [Bookmark](#)

Two pipes can fill a tank in 6 hours and 8 hours respectively while a third pipe empties the full tank in 12 hours. If all the three pipes operate simultaneously, in how much time will the tank be filled?

- **A** 7(1/2) hrs
- **B** 4(4/5) hrs
- **C** 3 (2/7) hrs
- **D** 1(1/5) hrs

Correct Answer :B

## Explanation

#472 [Explained](#) [Report](#) [Bookmark](#)

Find/Pick the odd man out

9, 16, 25, 36, 125, 169, 196, 225

- **A**36
- **B**196
- **C**169
- **D**125

Correct Answer :D

## Explanation

All numbers except 125 are perfect squares.

$$5^3 = 125$$

Hence, the odd number is 125

#473 [Explained](#) [Report](#) [Bookmark](#)

Find the compound interest on Rs. 5000 for 9 months at 6% per annum, if the interest is reckoned quarterly.

- **A**Rs. 218.98
- **B**Rs. 228.39
- **C**Rs. 250.69
- **D**Rs. 356.50

Correct Answer :B

## Explanation

**#474** Explained Report Bookmark

A contractor pays Rs. 20 to a worker for each day and the worker forfeits Rs. 10 for each day if he is idle. At the end of 60 days, the worker gets Rs. 300. Find for how many days the worker was idle?

- **A** 28 days
- **B** 30 days
- **C** 34 days
- **D** 40 days

Correct Answer :B

## Explanation

Step 1: Number of days worked by the worker = 60 and he remained idle for x days. Therefore, number of days worked =  $(60 - x)$  Step 2: Each day he was getting paid Rs. 20. Therefore, the payment received for working days =  $(60 - x) 20$  Step 3: After subtracting the amount which he forfeited, he receives Rs. 300. Therefore,  $(60 - x) 20 - 10x = 300$   
 $1200 - 20x - 10x = 300$   
 $900 = 30x$   $x = 30$  days

**#475** Explained Report Bookmark

A booster pump can be used to fill as to empty the tank. The capacity of the tank is 1200 m<sup>3</sup>. The emptying capacity of the tank is 10 m<sup>3</sup> per minute higher than its filling capacity and the pump requires 4 minutes lesser to vacant the tank than it requires to fill it. Calculate the filling capacity of the pump.

- **A** 25
- **B** 50
- **C** 75
- **D** 100

Correct Answer :B

## Explanation

Assume that the filling capacity of the pump =  $x$  m<sup>3</sup>/min

Given condition : Emptying capacity of the tank is 10 m<sup>3</sup> per minute higher than its filling capacity. This means that the emptying capacity of the pump is =  $x + 10$  m<sup>3</sup>/min

We need to filling the capacity of pump from the given relation of filling & emptying capacities. Hence, we can write that,

$$1200 / x - 1200 / (x + 10) = 4$$

$$[1/x - 1/(x+10)] = 1/300$$

By solving the above equation, we get the simplified form of quadratic equation.

$$\text{So, } x^2 + 10x - 3000 = 0$$

$$(x + 60)(x - 50) = 0$$

Therefore, we get two values of 'x'; i.e.  $x = -60$  &  $x = 50$

Since we are asked to find the filling capacity, which is always positive; we will neglect the negative value of  $x = -60$ .

Therefore, the filling capacity of the pump = 50 m<sup>3</sup>/min.

#476 [Explained](#) [Report](#) [Bookmark](#)

The population of a city A which is 68000 decreases at the rate of 1200/year. Population of city B which is 42000, increases at the rate of 800 per year. Find in how many years, the population of cities A and B are equal?

- **A** 9 years
- **B** 10 years
- **C** 13 years
- **D** 15 years

Correct Answer :C

## Explanation

We have to find the population of cities A and B after  $x$  years. Step 1: Population of city A = 68000, decreases at the rate of 1200/year  $68000 - 1200x$  Step 2: Population of city B = 42000, increases at the rate of 800/year  $42000 + 800x$  Step 3: Find after how many population of cities A and B are equal. Population of city A = Population of city B  $68000 - 1200x = 42000 + 800x$   $68000 - 42000 = 1200x + 800x$   $26000 = 2000x$   $x = 13$

#477 [Explained](#) [Report](#) [Bookmark](#)



Find the three consecutive odd numbers whose sum of the squares is 2531.

- **A** 19, 21, 23
- **B** 23, 25, 27
- **C** 27, 29, 31
- **D** 31, 33, 35

Correct Answer :C

## Explanation

Let three consecutive odd numbers be  $x$ ,  $x+2$ ,  $x+4$ .  $x^2+(x+2)^2+(x+4)^2=2531$   
Simplifying we get,  $x^2+4x-837=0$   $27 \times 31 = 837$  and also the difference between 27 and 31 is 4 Therefore,  $x^2+31x-27x-837=0$   $(x + 31) (x - 27) X = 27$  or  $x = -31$  Hence, the value of  $x = 27$   $(x+2) = 27 + 2 = 29$   $(x+4) = 27 + 4 = 31$

#478 [Explained](#) [Report](#) [Bookmark](#)

Find the average weight of whole class if

There are two batches A and B of a class.

Batch A consists of 36 students and batch B consists of 44 students,

if average weight of batch A is 40 kg and that of batch B is 35 kg.

- **A**  
29.23 kg
- **B**  
32.56 kg
- **C**  
35.66 kg
- **D**  
37.25 kg

Correct Answer :D

## Explanation

Average weight of batch A = 40 kg ,

average weight of batch B = 35 kg 1)

First find the total weight of all students - Weight of batch A =  $(36 \times 40) = 1440$  - Weight of batch B =  $(44 \times 35) = 1540$

Total weight of all students =  $(1440 + 1540) = 2980$  kg 2)

Find average weight of whole class (Batch A + Batch B) students =  $(36 + 44) = 80$

students Average Weight =  $( \text{Total weight of all the students} / \text{No. of Students} ) = ( 2980 / 80 ) = 37.25$

#479 [Explained](#) [Report](#) [Bookmark](#)

Which of the following year is not a leap year?

- **A** 1960
- **B** 2080
- **C** 2024
- **D** 2100

Correct Answer :D

## Explanation

The two conditions that decide that a year is a leap year or not is:

- For a year to be a leap year, it should be divisible by 4.

- No century is a leap year unless it is divisible by 400.

Hence, the year 2100 is not a leap year as it is not divisible by 400.

#480 [Explained](#) [Report](#) [Bookmark](#)

If  $9^x - 9^x - 1 = 648$ , then find the value of  $x$

- [A](#)4
- [B](#)9
- [C](#)27
- [D](#)64

Correct Answer :D

## Explanation

USE ....  $X^m \times X^n = X^{m+n}$

#481 [Explained](#) [Report](#) [Bookmark](#)

The sum of the ages of a father and son is 45 years. Five years ago, the product of their ages was four times the father's age at that time. The present age of father and son

- [A](#)34,11
- [B](#)35,10
- [C](#)36,9
- [D](#)40,5

Correct Answer :C

## Explanation

Let sons age =  $x$  years. Then fathers age =  $(45 - x)$  years.  $(x-5)(45-x-5) = 4(45-x-5)$  hence  $(x-5) = 4$  so  $x = 9$  Their ages are 36 years and 9 years.

#482 [Explained](#) [Report](#) [Bookmark](#)

What least value should be replaced by \* in  $223*431$  so the number become divisible by 9

- **A**3
- **B**4
- **C**5
- **D**6

Correct Answer :A

## Explanation

Number is divisible by 9, if sum of all digits is divisible by 9, so  $(2+2+3+*+4+3+1) = 15+*$  should be divisible by 9,

$15+3$  will be divisible by 9,

so that least number is 3.

#483 [Explained](#) [Report](#) [Bookmark](#)

Simplify  $586645 * 9999$

- **A**5865863355
- **B**5665863355
- **C**4865863355
- **D**4665863355

Correct Answer :A

## Explanation

Although it is a simple question, but the trick is to save time in solving this. Rather than multiplying it we can do as follows:  $586645 * (10000 - 1) = 5866450000 - 586645 = 5865863355$

#484 [Explained](#) [Report](#) [Bookmark](#)

What will be the LCM of 8, 24, 36 and 54

- **A**54
- **B**108
- **C**216
- **D**432

Correct Answer :C

## Explanation

LCM of 8-24-36-54 will be

$$2*2*2*3*3*3 = 216$$

#485 [Explained](#) [Report](#) [Bookmark](#)

Find the unit digit in

$$(544)^{102} + (544)^{103}$$

- **A**2
- **B**4
- **C**0
- **D**1

Correct Answer :C

## Explanation

#486 [Explained](#) [Report](#) [Bookmark](#)

How many pieces of 0.85 meteres can be cut from a rod 42.5 meteres long

- [A](#)30
- [B](#)40
- [C](#)50
- [D](#)60

Correct Answer :C

## Explanation

We need so simple divide  $42.5/0.85$ ,

$$=(4250/85) = 50$$

#487 [Explained](#) [Report](#) [Bookmark](#)

A man buys an item at Rs. 1200 and sells it at the loss of 20 percent. Then what is the selling price of that item

- [A](#)Rs. 660
- [B](#)Rs. 760
- [C](#)Rs. 860
- [D](#)Rs. 960

Correct Answer :D

## Explanation

Here always remember, when ever  $x\%$  loss, it means  $S.P. = (100 - x)\%$  of C.P when ever  $x\%$  profit, it means  $S.P. = (100 + x)\%$  of C.P So here will be  $(100 - x)\%$  of C.P. =  $80\%$  of 1200 =  $80/100 * 1200 = 960$

#488 [Explained](#) [Report](#) [Bookmark](#)

The ratio between the present ages of P and Q is 6:7. If Q is 4 years old than P, what will be the ratio of the ages of P and Q after 4 years

- **A** 7:8
- **B** 7:9
- **C** 3:8
- **D** 5:8

Correct Answer :A

## Explanation

Let P age and Q age is  $6x$  years and  $7x$  years. Then  $7x - 6x = 4 \Leftrightarrow x = 4$  So required ratio will be  $(6x+4): (7x+4) \Rightarrow 28:32 \Rightarrow 7:8$

#489 [Explained](#) [Report](#) [Bookmark](#)

Find the HCF of 54, 288, 360

- **A** 18
- **B** 36
- **C** 54
- **D** 108

Correct Answer :A

## Explanation

Lets solve this question by factorization method.

$$18=2 \times 3^2, 288=2^5 \times 3^2, 360=2^3 \times 3^2 \times 5$$

So HCF will be minimum term present in all three, i.e.

$$2 \times 3^2 = 18$$

#490 [Explained](#) [Report](#) [Bookmark](#)

Marks of a student were wrongly entered in computer as 83, actual marks of that student were 63. Due to this mistake average marks of whole class got increased by half ( $1/2$ ). Find the total number of students in that class.

- [A25](#)
- [B30](#)
- [C35](#)
- [D40](#)

Correct Answer :D

## Explanation

Suppose total number of students are = X

$$\text{Total increase} = x * (1/2)$$

$$= x/2$$

$$\Rightarrow x/2 = 83 - 63 = 20$$

$$\Rightarrow x = 40$$



#491 [Explained](#) [Report](#) [Bookmark](#)

$$8/15 \div 1 \frac{1}{3} \times 3 \frac{?}{4} = 1.5$$

- [A1](#)
- [B2](#)
- [C3](#)
- [D5](#)

Correct Answer :C

## Explanation

$$8/15 \times 3/4 \times 3 \frac{?}{4} = 1.5 \Rightarrow 3 \frac{?}{4} = 3/2 \times 5/2 = 15/4 = 3 \frac{3}{4} \Rightarrow ? = 3.$$

#492 [Explained](#) [Report](#) [Bookmark](#)

If Rs. 782 be divided into three parts, proportional to  $1/2:2/3:3/4$ , then the first part is:

- [A](#)Rs. 182
- [B](#)Rs. 190
- [C](#)Rs. 196
- [D](#)Rs. 204

Correct Answer :D

## Explanation

$$\text{Given ratio} = 1/2:2/3:3/4 = 6:8:9 \text{ 1st part} = 782 \times 6/23 = \text{Rs. 204.}$$

#493 [Explained](#) [Report](#) [Bookmark](#)

Three persons invested Rs.9000 in a joint business. The second person invested Rs.1000 more than the first and the third Rs.1000 more than second. After two years, they gained Rs.5400. How much third person will get?

- **A**Rs.2400
- **B**Rs.3600
- **C**Rs.2850
- **D**Rs.2000

Correct Answer :A

## Explanation

First persons investment = x Second persons investment = x + 1000 Third persons investments = x + 2000  
 $x + x + 1000 + x + 2000 = 9000$   
 $3x = 6000$   
 $x = 2000$   
Ratio = 2000 : 3000 : 4000 2:3:4  
 $\frac{4}{9} * 5400 = 2400$

#494 [Explained](#) [Report](#) [Bookmark](#)

Rs.160 contained in a box consists of one rupee, 50 paisa and 25 paisa coins in the ratio 4:5:6. What is the number of 25 paisa coins?

- **A**100
- **B**115
- **C**120
- **D**110

Correct Answer :C

## Explanation

$$4x$$

$$5x$$

$$6x$$

$$100$$

$$50$$

$$25$$

$$400x + 350x + 150x = 16000$$

$$x = 20$$

$$6x = 120$$

#495 [Explained](#) [Report](#) [Bookmark](#)

Which one of the following represents the sum of the first n even numbers?

- **A**  
 $N(N - 1)$
- **B**  
 $N(N + 1)$
- **C**  
 $N^2 + 1$
- **D**  
 $N^2$

Correct Answer :B

## Explanation

Sum of first n terms of an A.P. (Arithmetic Progression)

$$= (n/2) * [2*a + (n-1)*d] \dots (i)$$

where,  $a$  is the first term of the series and  $d$  is

the difference between the adjacent terms of the series.

Here,  $a = 2$ ,  $d = 2$ , applying these values to eq.(i), we get

$$\text{Sum} = (n/2) * [2*2 + (n-1)*2]$$

$$= (n/2) * [4 + 2*n - 2]$$

$$= (n/2) * (2*n + 2)$$

$$= n * (n + 1)$$

#496 [Explained](#) [Report](#) [Bookmark](#)

P alone can complete a piece of work in 6 days. Work done by Q alone in one day is equal to one-third of the work done by P alone in one day. In how many days can the work be completed if P and Q work together?

- **A**  $4(3/4)$
- **B**  $4(1/2)$
- **C** 4
- **D** 5

Correct Answer :B

## Explanation

Work done by P alone in one day =  $\frac{1}{6}$ th of the total work done by Q alone in one day =  $\frac{1}{3}$ (of that done by P in one day) =  $\frac{1}{3}(\frac{1}{6} \text{ of the total}) = \frac{1}{18}$  of the total.

Work done by P and Q, working together in one day =  $\frac{1}{6} + \frac{1}{18} = \frac{4}{18} = \frac{2}{9}$  of the total

They would take  $\frac{9}{2}$  days = 4  $(\frac{1}{2})$  days to complete the work working together.

#497 [Explained](#) [Report](#) [Bookmark](#)

A train moves past a telegraph post and a bridge 264 m long in 8 sec and 20 sec respectively. What is the speed of the train?

- **A** 69.5 km/hr
- **B** 70 km/hr
- **C** 79 km/hr
- **D** 79.2 km/hr

Correct Answer :D

## Explanation

Let the length of the train be  $x$  m and its speed be  $y$  m/sec.

Then,  $\frac{x}{y} = 8 \Rightarrow x = 8y$

$\frac{(x + 264)}{20} = y$

$y = 22$

Speed = 22 m/sec =  $22 * \frac{18}{5} = 79.2$  km/hr.

#498 [Explained](#) [Report](#) [Bookmark](#)

The cost of 10 kg of apples is equal to the cost of 24 kg of rice. The cost of 6 kg of flour equals the cost of 2 kg of rice. The cost of each kg of flour is Rs.20.50. Find the total cost of 4 kg of apples, 3 kg of rice and 5 kg of flour?

- [A](#) Rs.849.40
- [B](#) Rs.877.40
- [C](#) Rs.901.60
- [D](#) Rs.815.20

Correct Answer :B

## Explanation

Let the costs of each kg of apples and each kg of rice be Rs.a and Rs.r respectively.

$$10a = 24r \text{ and } 6 * 20.50 = 2r$$

$$a = \frac{12}{5} r \text{ and } r = 61.5$$

$$a = 147.6$$

$$\text{Required total cost} = 4 * 147.6 + 3 * 61.5 + 5 * 20.5$$

$$= 590.4 + 184.5 + 102.5 = \text{Rs.}877.40$$

#499 [Explained](#) [Report](#) [Bookmark](#)

The equal amounts of money are deposited in two banks each at 15% per annum for 3.5 years and 5 years respectively. If the difference between their interests is Rs.144, find the each sum?

- **A**Rs.3467
- **B**Rs.640
- **C**Rs.500
- **D**None

Correct Answer :B

## Explanation

$$(P \times 5 \times 15)/100 - (P \times 3.5 \times 15)/100 = 144$$

$$75P/100 - 52.5P/100 = 144$$

$$22.5P = 144 \times 100$$

$$\Rightarrow P = \text{Rs.}640$$

#500 [Explained](#) [Report](#) [Bookmark](#)

The capacities of three bottles are in the ratio 4 : 5 : 7. If the smallest bottle has the capacity of 420 ml. The capacities of the other two would be

- **A**525 ml and 734 ml
- **B**524 ml and 735 ml
- **C**425 ml and 835 ml
- **D**525 ml and 735 ml

Correct Answer :D

## Explanation

capacity of smallest bottle 420 ml Ratio of smallest bottle is 4 (  $420 / 4$  ) =105 ml Capacity of second bottle =  $105 * 5 = 525$  ml Capacity of third bottle  $105 * 7 = 735$  ml

#501 [Explained](#) [Report](#) [Bookmark](#)

What is the ratio of 4 inches to 8 feet?

- **A** 1:15
- **B** 1:24
- **C** 2:35
- **D** 4:13

Correct Answer :B

## Explanation

First convert everything to the same unit (inches and feet)  $\therefore$  1 foot = 12 inches So, 4 inches to 8 feet is  $4:96$  1:24 Ans

#502 [Explained](#) [Report](#) [Bookmark](#)

A's mother is twice as old as A's brother. A is 6 years younger than his brother but 4 years older than his sister. If A's sister is 15 his mother's age is?

- **A** 40
- **B** 45
- **C** 50
- **D** 54



Correct Answer :C

## Explanation

Mother's Age = 2(Brother's Age) And brother = 6 > A's age > Sister = 4, But  
A's = 4 + 15 = 19, Brothers = 19 + 6 = 25 Mother's = 25 \* 2 = 50

#503 [Explained](#) [Report](#) [Bookmark](#)

The heights of 10 students in a certain class is 155cm, 158cm, 162cm, 160cm, 165cm, 165cm, 156cm, 166cm, 164cm and 169cm. What is the average height of a student in the class.

- ☒ A 160 cm
- ☐ B 162 cm
- ☐ C 164 cm
- ☐ D 166 cm

Correct Answer :B

## Explanation

Average = ( sum / n ) Total height of students = (155 + 158 + 162 + 160 + 165 + 165 + 156 + 166 + 164 + 169) = 1620 = 1620 / 10 = 162

#504 [Explained](#) [Report](#) [Bookmark](#)

A and B can reap a field in 30 days working together. After 20 days, however B is called away and A takes 20 days more to complete the work. B alone can do the whole work in?

- ☒ A 48 days
- ☐ B 50 days
- ☐ C 56 days
- ☐ D 60 days

Correct Answer :D

## Explanation

#505 [Explained](#) [Report](#) [Bookmark](#)

A train takes 50 minute for a journey if it runs at 48 km/hr. The rate at which the train must run to reduce the time to 40 minutes will be

- **A** 50 km/hr
- **B** 55 km/hr
- **C** 60 km/hr
- **D** 57 km/hr

Correct Answer :C

## Explanation

$v_1 = 48 \text{ km/h}$ ,  $t_1 = 50 \text{ min}$   $v_2 = ?$ ,  $t_2 = 40 \text{ min}$  Less time, more speed (inverse proportion)  $(v_2 / v_1) = (t_2 / t_1)$   $v_2 = v_1 (t_1 / t_2) = 48 * (50 / 40) = 60 \text{ km/h}$

#506 [Explained](#) [Report](#) [Bookmark](#)

In a co-education secondary school 55% of the students are boys. There are 360 girls in the school. The number of boys in the school is?

- **A** 400
- **B** 450
- **C** 440
- **D** 460

Correct Answer :C

## Explanation

$$x - 55\%x = 360 \therefore x = 100 ( 45 / 100 ) * x = 360 \quad x = ( 360*100 ) / 45 \text{ Total Students} \\ = 800, \text{ Girls} = 360 \text{ Boys} = 800 - 360 = 440$$

#507 [Explained](#) [Report](#) [Bookmark](#)

A primary school had an enrollment of 850 pupils in January 1970. In January 1980 the enrollment was 1120. What was the percentage increase for the enrollment?

- **A** 31.76%
- **B** 33.50%
- **C** 30.65%
- **D** 34.76%

Correct Answer :A

## Explanation

$$= [ ( 1120 - 850 ) / 850 ] * 10 = 31.76$$

#508 [Explained](#) [Report](#) [Bookmark](#)

A father said to his son, "I was as old as you are at the present at the time of your birth". If the father's age is 38 years now, the son's age five years back was

- **A** 38 years
- **B** 19 years
- **C** 33 years

- **D**  
14 years

Correct Answer :D

## Explanation

Let the son's present age be  $x$  years. Then,  $(38 - x) = x \Rightarrow 2x = 38 \Rightarrow x = 19$ .  $\therefore$  Son's age 5 years back  $(19 - 5) = 14$  years

#509 [Explained](#) [Report](#) [Bookmark](#)

10 men can complete a job in 14 days. How long will it take 4 men to finish the same job if they work at the same rate

- **A** 33 days
- **B** 35 days
- **C** 37 days
- **D** 39 days

Correct Answer :B

## Explanation

$M_1 = 10, T_1 = 14$  days  $M_2 = 4, T_2 = ?$   $T_2 = \frac{M_1 T_1}{M_2} = \frac{(10 * 14)}{4} = 35$  days

#510 [Explained](#) [Report](#) [Bookmark](#)

A person sold two hens for Rs. 105 each . On one he lost 25% . On the other he gained 50% . What is the gain or loss on his total outlay ?

- **A** 12.5%
- **B** 20%
- **C** 28.3%

- **D** Neither gain Nor loss

Correct Answer :D

## Explanation

$$[100 \times (\text{Profit} - \text{Loss}) \times 2 \times \text{Profit} \times \text{Loss}] / (100 + \text{Profit}) + (100 - \text{Loss}) = 0\%$$

#511 [Explained](#) [Report](#) [Bookmark](#)

The ratio of the present age of A to that of B is 3 : 11. B is 12 years younger than C. C's age after 7 years will be 85 years. What is the present age of A's father, who is 25 years older than A ?

- **A** 33 years
- **B** 40 years
- **C** 43 years
- **D** 48 years

Correct Answer :C

## Explanation

Present age of C = 85 – 7 = 78 years  
 Present age of B = 78 – 12 = 66 years  
 Present age of A =  $\frac{3}{11} \times 66 = 18$  years  
 Present age of A's father = 18 + 25 = 43 years

#512 [Explained](#) [Report](#) [Bookmark](#)

A tank has leak which would empty the completely filled tank in 10 hours. If the tank is full of water and a tap is opened which admits 4 liters of water

per minute in the tank, the leak takes 15 hours to empty the tank. How many liters of water does the tank hold ?

- **A**2400
- **B**3600
- **C**4800
- **D**7200

Correct Answer :D

## Explanation

Let, the capacity of the tank be "X" liters. According to the problem:  $15 \times (X/10 - 4 \times 60) = X$  Or  $X = 7200$  liters

#513 [Explained](#) [Report](#) [Bookmark](#)

A vendor buy Fresh Fruits, contain 70% water and also buy Dry Fruits which contain 40% water. If he buys 120 kg of Fresh Fruits,how much quantity of Dry Fruits can be obtains from that quantity?

- **A**56 kg
- **B**60 kg
- **C**64 kg
- **D**72 kg

Correct Answer :B

## Explanation

Given ,total quantity of fresh fruits = 120 kg In the fresh fruits , water contain =  $120 \times (70/100) = 84$  kg and non-water contain =  $120 - 84 = 36$  kg. In the Dry fruits, water contain = 40% and non-water contain 60%. Since, Non-water quantity is always constant i.e.  $60\% = 36$  kg or  $100\% = (36/60) \times 100 = 60$  kg Thus , Dry fruits quantity = 60 kg in 120 kg of Fresh fruits .

### #514 [Explained](#) [Report](#) [Bookmark](#)

The batting average of 30 innings of a cricketer is 40 runs. His highest score exceeds his lowest score by 100 runs. If these two innings are not included, the average of the remaining 28 innings is 38. What is the lowest score of the player ?

- [A12](#)
- [B16](#)
- [C18](#)
- [D20](#)

Correct Answer :C

## Explanation

Let, the highest and lowest score are  $x$  and  $y$  respectively. So,  $x + y = (40 \times 30) - (28 \times 38) = 136$  ----- (i) Given,  $x - y = 100$  ----- (ii) Given,  $x - y = 100$  By solving, the above equation we get,  $x = 118$  and  $y = 18$

### #515 [Explained](#) [Report](#) [Bookmark](#)

If  $a - b = 9$  and  $a^2 + b^2 = 125$ , then what should be the value of  $ab$  ?

- [A16](#)
- [B18](#)
- [C20](#)
- [D22](#)

Correct Answer :D

## Explanation

We know that,  $2ab = (a^2 + b^2) - (a - b)^2 = 125 - 81 = 44$  or  $ab = 22$ .

#516 [Explained](#) [Report](#) [Bookmark](#)

The cost of 16 pens and 12 pencils is Rs. 720. What is the cost of 20 pens and 15 pencils ?

- [A](#)Rs.800
- [B](#)Rs.840
- [C](#)Rs. 880
- [D](#)Rs.900

Correct Answer :D

## Explanation

Let, the price of the pen be 'x' and that of a pencil be 'y'.  $16x + 12y = 720$  or  $(16x) \times \frac{5}{4} + 12y \times \frac{5}{4} = 720 \times \frac{5}{4}$  or  $20x + 15y = 900$

#517 [Explained](#) [Report](#) [Bookmark](#)

The sum of the squares of two positive integers is 208. If the square of the larger number is 18 times the smaller number, then what would be the difference of the larger and smaller numbers

- [A](#)2
- [B](#)4
- [C](#)3
- [D](#)6

Correct Answer :B

## Explanation



Let, the larger and smaller numbers are  $x$  and  $y$  respectively.  $x^2 + y^2 = 208$  -  
 ----- (i)  $x^2 = 18y$  or  $x^2 - 18y = 0$  ----- (ii) Equating from both equation, we  
 get  $y^2 + 18y - 208 = 0$  or  $y^2 + 26y - 8y - 208 = 0$  or  $y(y+26) - 8(y+26) = 0$  or  $y$   
 $= 8$  so,  $x = 12$  Therefore,  $x-y = 12 - 8 = 4$

#518 [Explained](#) [Report](#) [Bookmark](#)

the question below is followed by three statements I, II and III. You have to determine whether the data given in the statement/statements is sufficient for answering the question. You should use the data and your knowledge of Mathematics to choose the best possible answer.

What is the speed of boat in still water ?

- I. The boat can cover 25 km downstream distance in 5 hours.
- II. Speed of the stream is two-third of the speed of boat in still water.
- III. The boat can cover 25 km upstream distance in 10 hours.

- **A**  
I and II together
- **B**  
Only II
- **C**  
I and II together
- **D**  
I and either II or III

Correct Answer :D

## Explanation

Let speed of boat in still water be  $x$  kmph and velocity of stream be  $y$  kmph respectively.

So, from I, we get  $x+y = 5$  kmph

From II, it given  $y = \frac{2x}{3}$ ,

we get  $x = 3$  kmph and  $y = 2$  kmph

From III, we get,  $x - y = 2.5$  kmph

Therefore, to find out the speed of the boat any two statements together is sufficient.

#519 [Explained](#) [Report](#) [Bookmark](#)

The ratio between A's and B's salary was 3:4, two years ago. The ratio's of individual salaries of A and B two years ago and this year's salaries are 4:5 and 2:3 respectively. At present the total of their salary is Rs.4290. What is present salary of A?

- **A** Rs.1560
- **B** Rs.1600
- **C** Rs.1650
- **D** Rs.1840

Correct Answer :C

## Explanation

Let, two years ago, the ratio of between A's and B's salary was  $3x : 4x$  respectively. The ratio of their individual salary between two years ago and this year is  $4y : 5y$  and  $2z : 3z$  respectively. So,  $4y = 3x$  (A's last year salary) or  $y = .75x$  and  $2z = 4x$  (B's last year salary) or  $z = 2x$  Now, the total of their

salary is Rs.4290 . So,  $5y + 3z = \text{Rs.4290}$  Replace  $y$  with  $.75x$ ; replace  $z$  with  $2x$  So,  $5(.75x) + 3(2x) = 4290$  or  $3.75x + 6x = \text{Rs.4290}$  or  $9.75x = 4290$  or  $x = 4290/9.75 = 440$  Then, A's present salary  $3.75 (440) = \text{Rs.1650}$

#520 [Explained](#) [Report](#) [Bookmark](#)

A is 30% more efficient than B. How much time will they, working together, take to complete a job which A alone could have done in 23 days?

- **A** 11 days
- **B** 13 days
- **C** 20 days
- **D** None of these

Correct Answer :B

## Explanation

#521 [Explained](#) [Report](#) [Bookmark](#)

$\{(476 + 424)^2 - 4 \times 476 \times 424\} = ?$

- **A** 2906
- **B** 3116
- **C** 2704
- **D** 2904

Correct Answer :C

## Explanation

$\{(476 + 424)^2 - 4 \times 476 \times 424\} = [(a + b)^2 - 4ab]$ , where  $a = 476$  and  $b = 424 =$   
 $[(476 + 424)^2 - 4 \times 476 \times 424] = [(900)^2 - 807296] = 810000 - 807296 = 2704.$

#522 [Explained](#) [Report](#) [Bookmark](#)

A container contains 40 litres of milk. From this container 4 litres of milk was taken out and replaced by water. This process was repeated further two times. How much milk is now contained by the container?

- ☒ A 26.34 litres
- ☐ B 27.36 litres
- ☐ C 28 litres
- ☐ D 29.16 litres

Correct Answer :D

## Explanation

#523 [Explained](#) [Report](#) [Bookmark](#)

8 litres are drawn from a cask full of wine and is then filled with water. This operation is performed three more times. The ratio of the quantity of wine now left in cask to that of water is 16 : 65. How much wine did the cask hold originally?

- ☒ A 18 litres
- ☐ B 24 litres
- ☐ C 32 litres
- ☐ D 42 litres

Correct Answer :B

## Explanation

#524 [Explained](#) [Report](#) [Bookmark](#)

$$287 \times 287 + 269 \times 269 - 2 \times 287 \times 269 = ?$$

- [A](#)534
- [B](#)446
- [C](#)354
- [D](#)324

Correct Answer :D

## Explanation

$$a^2 + b^2 - 2ab, \text{ where } a = 287 \text{ and } b = 269$$

$$(a - b)^2 = (287 - 269)^2$$

$$= (18)^2$$

$$= 324$$

#525 [Explained](#) [Report](#) [Bookmark](#)

A clock is started at noon. By 10 minutes past 5, the hour hand has turned through:

- [A](#)145°
- [B](#)150°

- **C** 155°
- **D** 160°

Correct Answer :C

## Explanation

Angle traced by hour hand in 12 hrs = 360°.

Angle traced by hour hand in 5 hrs 10 min =  $(31 / 6)$  hrs =  $[(360 / 12) * (31/6)]^\circ$

= 155°

#526 **Explained** **Report** **Bookmark**

One-third of Rahul's savings in National Savings Certificate is equal to one-half of his savings in Public Provident Fund. If he has Rs. 1,50,000 as total savings, how much has he saved in Public Provident Fund ?

- **A** Rs. 30,000
- **B** Rs. 50,000
- **C** Rs. 60,000
- **D** Rs. 90,000

Correct Answer :C

## Explanation

#527 [Explained](#) [Report](#) [Bookmark](#)

The average weight of a class of 13 students is 14 years. When two more students joined the class, the average rose by 3 years. What is the average weight of the two new students

- **A**73
- **B**60
- **C**36.5
- **D**67.5

Correct Answer :C

## Explanation

Weight of 13 students  $\Rightarrow 13 \times 14 = 182$  New weight of students when 2 more students joined the class  $15 \times 17 = 255$  Difference in weight  $\Rightarrow 255 - 182 \Rightarrow 73$  So, sum of the weights of the two new students is 73. Average of two new students  $= (73 / 2) = 36.5$

#528 [Explained](#) [Report](#) [Bookmark](#)

complete the series ?

5, 8, 13, 21, ....

- **A**55
- **B**34
- **C**52
- **D**37

Correct Answer :B

## Explanation

The sum of 1st two numbers (5 & 8) is the third (13) and the sum of next two.

#529 [Explained](#) [Report](#) [Bookmark](#)

The average salary of all the employees in a factory is Rs. 600. The average salary of the officers is Rs. 4000 and that of the rest of the workers is Rs. 560. If there are 12 officers, the total number of workers in the factory are?

- [A](#)1008
- [B](#)1028
- [C](#)1020
- [D](#)1032

Correct Answer :C

## Explanation

Total salary of officers + Total salary of workers = Total salary of all employees  
 $12 * 4000 + x * 560 = 600(x + 12)$   
 $48,000 + 560x = 600x + 7200$   
 $48,000 - 7200 = 600x - 560x$   
 $40,800 = 40x$  hence  $x = (40,800 / 40) = 1020$

#530 [Explained](#) [Report](#) [Bookmark](#)

A student has to secure 40% marks to pass. He gets 40 marks and fails by 40 marks. The maximum number of marks is?

- [A](#)300
- [B](#)250
- [C](#)200
- [D](#)175

Correct Answer :C



## Explanation

He got 40 marks and failed by 40. So, the passing marks are  $40 + 40 = 80$   
 $40\% \text{ of } x = 80 \Rightarrow x = (80 * 100) / 40 = 200$

#531 [Explained](#) [Report](#) [Bookmark](#)

A train takes 50 minute for a journey if it runs at 48 km/hr. The rate at which the train must run to reduce the time to 40 minutes will be

- **A** 50 km/hr
- **B** 55 km/hr
- **C** 57 km/hr
- **D** 60 km/hr

Correct Answer :D

## Explanation

$v_1 = 48 \text{ km/h}$ ,  $t_1 = 50 \text{ min}$   $v_2 = ?$ ,  $t_2 = 40 \text{ min}$  Less time, more speed (inverse proportion)  $v_2 = v_1 (t_1 / t_2) = 48 (50 / 40) = 60 \text{ km/h}$

#532 [Explained](#) [Report](#) [Bookmark](#)

A man normally takes 5 hours to travel at a certain speed from city A to city B. One day he increases in speed by 4 km/h and finds that the journey from A to B takes half an hour less than the normal time. Find his normal speed.

- **A** 36 km/h
- **B** 37 km/h
- **C** 38 km/h
- **D** 39 km/h

Correct Answer :A

## Explanation

Speed =  $v$ , speed =  $v + 4$   $t = 5$  hrs,  $t = 4 \frac{1}{2}$  hrs  $5v = [ \frac{9}{2} ( v + 4 ) ] v = 18 / 0.5 = 36$  kmh

#533 [Explained](#) [Report](#) [Bookmark](#)

In what proportion must a man mix milk at Rs. 11 a litre with milk at Rs. 6 a litre, so that the mixture may be worth Rs. 8 a litre?

- **A** 2 : 3
- **B** 5 : 4
- **C** 3 : 5
- **D** 5 : 7

Correct Answer :A

## Explanation

Multiply by 100 to remove point to make it simple So,  $720 - 630 = 90$ , and  $630 - 570 = 60$   $60 : 90$  cheaper quantity is mixed in more amount so answer is 2 : 3

#534 [Explained](#) [Report](#) [Bookmark](#)

A jug contains three parts of pure milk and one part of water. How much of the mixture must be drawn and water substituted, in order that the resulting mixture may be half milk and half water?

- **A**  $\frac{1}{2}$  nd
- **B**  $\frac{1}{5}$  th
- **C**  $\frac{1}{3}$  rd
- **D**  $\frac{1}{4}$  th

Correct Answer :A

## Explanation

Jar: 1 kg Water = 25%, Milk = 75% Let water added to the mixture New mixture =  $x + 1$  water = 50%  $(x + 1)$   $x + 1$  milk = 50%  $(x + 1)$   $50\% (x + 1) = 75\%$   
 $\Rightarrow 50\%x = 25\% \Rightarrow x = (25\% / 50\%) = 1/2$

#535 [Explained](#) [Report](#) [Bookmark](#)

Present ages of William and Alex are in the ratio of 5 : 4 respectively. Three years hence, the ratio of their ages will become 11 : 9 respectively. What is Alex's present age in years?

- [A](#)24
- [B](#)27
- [C](#)40
- [D](#)Cannot be determined

Correct Answer :A

## Explanation

#536 [Explained](#) [Report](#) [Bookmark](#)

Complete the sequence

66250, 13250, 2650, 530, ...

- [A](#)  
66
- [B](#)  
106
- [C](#)  
306

- **D**  
206

Correct Answer :B

## Explanation

Divide by 5.

$$66250 / 5 = 13250$$

$$13250 / 5 = 2650$$

$$2650 / 5 = 530$$

$$530 / 5 = 106$$

#537 [Explained](#) [Report](#) [Bookmark](#)

Speed of a boat in standing water is 9 kmph and the speed of the stream is 1.5 kmph. A man rows to a place at a distance of 105 km and comes back to the starting point. The total time taken by him is:

- **A** 16 hours
- **B** 18 hours
- **C** 20 hours
- **D** 24 hours

Correct Answer :D

## Explanation

Speed upstream = 7.5 kmph.

Speed downstream = 10.5 kmph.

∴ Total time taken =  $[(105 / 7.5) + (105 / 10.5)]$  hrs = 24 hrs

#538 [Explained](#) [Report](#) [Bookmark](#)

From a point P on a level ground, the angle of elevation of the top tower is  $30^\circ$ . If the tower is 100 m high, the distance of point P from the foot of the tower is:

- [A](#) 149 m
- [B](#) 156 m
- [C](#) 173 m
- [D](#) 200 m

Correct Answer :C

## Explanation

#539 [Explained](#) [Report](#) [Bookmark](#)

Which of the following is not a leap year?

- [A](#) 700
- [B](#) 800
- [C](#) 1200
- [D](#) 2000

Correct Answer :A

## Explanation

The century divisible by 400 is a leap year.

∴ The year 700 is not a leap year.

#540 [Explained](#) [Report](#) [Bookmark](#)

Find the odd man out.

835, 734, 642, 751, 853, 981, 532

- **A**751
- **B**853
- **C**981
- **D**532

Correct Answer :A

## Explanation

In each number except 751, the difference of third and first digit is the middle one.

#541 [Explained](#) [Report](#) [Bookmark](#)

Two tailors X and Y are paid a total of Rs. 550 per week by their employer. If X is paid 120 percent of the sum paid to Y, how much is Y paid per week?

- **A**Rs. 200
- **B**Rs. 250

- **C** Rs. 300
- **D** None of these

Correct Answer :B

## Explanation

Let the sum paid to Y per week be Rs.  $z$ .

Then,

$$z + 120\% \text{ of } z = 550.$$

Hence  $Z = 250$

#542 [Explained](#) [Report](#) [Bookmark](#)

Reena took a loan of Rs. 1200 with simple interest for as many years as the rate of interest. If she paid Rs. 432 as interest at the end of the loan period, what was the rate of interest?

- **A** 3.6
- **B** 6
- **C** 18
- **D** Cannot be determined

Correct Answer :B

## Explanation

Let rate = R% and time = R years.

Then,  $[(1200 * R * R) / 100] = 432$

$$\Rightarrow 12R^2 = 432$$

$$\Rightarrow R^2 = 36$$

$$\Rightarrow R = 6.$$

#543 [Explained](#) [Report](#) [Bookmark](#)

What is the unit digit in  $\{(6374)^{1793} \times (625)^{317} \times (341491)\}$ ?

- **A**0
- **B**2
- **C**3
- **D**5

Correct Answer :A

## Explanation

Unit digit in  $(6374)^{1793} = \text{Unit digit in } (4)^{1793}$

$= \text{Unit digit in } [(4^2)^{896} \times 4]$

$= \text{Unit digit in } (6 \times 4) = 4$



Unit digit in  $(625)^{317} = \text{Unit digit in } (5)^{317} = 5$

Unit digit in  $(341)^{491} = \text{Unit digit in } (1)^{491} = 1$

Required digit = Unit digit in  $(4 \times 5 \times 1) = 0$ .

#544 [Explained](#) [Report](#) [Bookmark](#)

Free notebooks were distributed equally among children of a class. The number of notebooks each child got was one-eighth of the number of children. Had the number of children been half, each child would have got 16 notebooks. Total how many notebooks were distributed ?

- [A](#)256
- [B](#)432
- [C](#)512
- [D](#)640

Correct Answer :C

## Explanation

#545 [Explained](#) [Report](#) [Bookmark](#)

What is the speed of the train?

- I. The train crosses a signal pole in 18 seconds.
- II. The train crosses a platform of equal length in 36 seconds.
- III. Length of the train is 330 metres.

- **A**I and II only
- **B**II and III only
- **C**I and III only
- **D**III and either I or II only

Correct Answer :D

## Explanation

#546 **Explained** **Report** **Bookmark**

How many of the following numbers are divisible by 132 ?

264, 396, 462, 792, 968, 2178, 5184, 6336

- **A**4
- **B**5
- **C**6
- **D**7

Correct Answer :A

## Explanation

$$132 = 4 \times 3 \times 11$$

So, if the number divisible by all the three number 4, 3 and 11, then the number is divisible by 132 also.

264 11,3,4 (/)

396 11,3,4 (/)

462 11,3 (X)

792 11,3,4 (/)

968 11,4 (X)

2178 11,3 (X)

5184 3,4 (X)

6336 11,3,4 (/)

Therefore the following numbers are divisible by 132 : 264, 396, 792 and 6336.

Required number of number = 4.

**#547** [Explained](#) [Report](#) [Bookmark](#)

**If the sale of coolers from E on Friday was 60% of that on Wednesday and Thursday together. Find the number of coolers sold by E on Friday.**

	Monday	Tuesday	Wednesday	Thursday
A	35	45	30	70
B	45	55	90	35
C	75	35	65	55
D	60	30	45	40
E	85	40	85	65

- **A**  
20
- **B**  
60
- **C**  
70
- **D**  
90

**Correct Answer :D**

## Explanation

Sale of coolers by E on Wednesday = 85  
 Sale of coolers by E on Thursday = 65  
 Sale of coolers by E on Friday = 60% of (85 + 65) = 60% of 150 = 90

**#548** [Explained](#) [Report](#) [Bookmark](#)

**What is the approximate percentage increase in the sale of coolers by seller A, from Monday to Tuesday?**

	Monday	Tuesday	Wednesday	Thursday
A	35	45	30	70
B	45	55	90	35
C	75	35	65	55

D	60	30	45	40
E	85	40	85	65

- **A**  
19
- **B**  
29
- **C**  
39
- **D**  
49

**Correct Answer :B**

## Explanation

Sale of coolers by A on Monday = 35 Sale of coolers by A on Tuesday = 45 %  
increase =  $[(45 - 35) / 35] * 100 = 29\%$

**#549** **Explained** **Report** **Bookmark**

**The number of coolers sold by B on Monday is how much less than that on Thursday and Wednesday together?**

	Monday	Tuesday	Wednesday	Thursday
A	35	45	30	70

B	45	55	90	35
C	75	35	65	55
D	60	30	45	40
E	85	40	85	65

- **A**  
20
- **B**  
40
- **C**  
60
- **D**  
80

Correct Answer :D

## Explanation

Required difference =  $(90 + 35) - 45 = 80$

**#550** [Explained](#) [Report](#) [Bookmark](#)

What is the ratio of number of coolers sold by A and D on Monday and C and B on Tuesday?

	Monday	Tuesday	Wednesday	Thursday
--	--------	---------	-----------	----------

A	35	45	30	70
B	45	55	90	35
C	75	35	65	55
D	60	30	45	40
E	85	40	85	65

- **A**  
10 : 11
- **B**  
11 : 10
- **C**  
19 : 18
- **D**  
18 : 19

**Correct Answer :C**

## Explanation

Reqd. ratio = ( 35 +6 0 ) / ( 35 + 55 ) = 19 /18



The number of coolers sold by C on Tuesday is approximately how much percent less than the number of coolers sold by D on Monday.

	Monday	Tuesday	Wednesday	Thursday
A	35	45	30	70
B	45	55	90	35
C	75	35	65	55
D	60	30	45	40
E	85	40	85	65

- **A**  
42
- **B**  
49
- **C**  
54
- **D**  
62

Correct Answer :A

**Explanation**

Number of coolers sold by C on Tuesday = 35 Number of coolers sold by D on Monday = 60  
Reqd. % =  $(60 - 35) / 60 = 42\%$

**#552** [Explained](#) [Report](#) [Bookmark](#)

What is the speed of the train?

- I. The train crosses a tree in 13 seconds.
  - II. The train crosses a platform of length 250 metres in 27 seconds.
  - III. The train crosses another train running in the same direction in 32 seconds.
- **A** I and II only
  - **B** II and III only
  - **C** I and III only
  - **D** Any two of the three

**Correct Answer :A**

## Explanation

**#553** [Explained](#) [Report](#) [Bookmark](#)

Solve :  $4611 - (18)^2 - 440 + (16)^2 = ?$

- **A** 4183
- **B** 4003
- **C** 4103
- **D** 4193

**Correct Answer :C**

## Explanation

Use BODMAS

#554 [Explained](#) [Report](#) [Bookmark](#)

Ram can complete a piece of work in 20 days. Ram started working alone but at the end of 5 days from starting Mohan joined him and they together complete remaining piece of work in 6 days less than Ram would have taken alone. In how many days, Ram and Mohan together can complete double of the work?

- [A](#)12
- [B](#)8
- [C](#)20
- [D](#)24

Correct Answer :D

## Explanation

#555 [Explained](#) [Report](#) [Bookmark](#)

At the end of 2 years, the difference between the simple interest and compound interest received on a sum of money is Rs. 500. At the end of 5 years under simple interest, double the sum of money become seven times the sum of money then what was the sum of money? (the rate of interest per annum was same in all the cases)

- [A](#)Rs. 40000
- [B](#)Rs. 20000
- [C](#)Rs. 2000
- [D](#)Rs. 10000

Correct Answer :C

## Explanation

#556 [Explained](#) [Report](#) [Bookmark](#)

In a farm, along with 50 hens, there were 45 goats and 8 horses and some farmers. If total number of feet be 224 more than number of heads, then find the number of farmers.

- **A**11
- **B**15
- **C**16
- **D**18

Correct Answer :B

## Explanation

Let's the number of farmers be  $y$ .

Step 1: Find number of heads

$$= (50 \text{ hens} + 45 \text{ goats} + 8 \text{ horses} + y \text{ farmers})$$

$$= (103 + y)$$

Step 2: Number of feet

$$= [(Hens\ 2 \times 50) + (45 \times 4) + (8 \times 4) + (y \times 2)]$$

$$= [100 + 180 + 32 + 2y]$$

$$= 312 + 2y$$

Step 3: Find number of farmers

$$(312 + 2y) - (103 + y) = 224$$

$$312 + 2y - 103 - y = 224$$

$$y = 15$$

Number of farmers = 15

**#557** [Explained](#) [Report](#) [Bookmark](#)

85 litres of mixture of milk and water contains 25 litres milk more than water. 15 litres of water is added to it. The ratio of milk to water in the final mixture is

- **A** 9 : 8
- **B** 10 : 9
- **C** 9 : 11
- **D** 11 : 9

**Correct Answer :D**

## Explanation

Let water in the mixture be  $x$  litres.  $\therefore$  Milk =  $x + 25$  litres Now,  $x + x + 25 = 85$  or,  
 $2x = 60 \therefore x = 30$  Thus, water = 30 litres Milk =  $x + 25 = 25 + 30 = 55$  litres After  
15 litres of water is added to it, water =  $30 + 15 = 45$  litres And milk = 55 litres

Reqd ratio =  $55 / 45 = 11 : 9$

**#558** Explained Report Bookmark

Tanu invested 50% more than Heena, Heena invested 20% less than Jaya. If the total sum of their investments is Rs. 30000, how much amount did Jaya invest?

- **A** Rs. 9520
- **B** Rs. 11500
- **C** Rs. 11000
- **D** Rs. 10000

**Correct Answer :D**

## Explanation

**#559** Explained Report Bookmark

The age of Rudra is  $x$  years. The age of Aarav and Viraaj is  $(x + 5)$  and  $(x - 2)$  years, respectively. After 2 years, Aarav's age will be  $11/6$  times the age of Rudra's age. 2 years hence, find the ratio of the age of Aarav and Viraaj ?

- **A** 4 : 3
- **B** 11 : 4
- **C** 13 : 6
- **D** 12 : 5

Correct Answer :B

## Explanation

#560 [Explained](#) [Report](#) [Bookmark](#)

Find the number of ways in which 8 different books can be arranged on a shelf so that 3 particular books shall not be together.

- **A** 28500
- **B** 26000
- **C** 36100
- **D** 36000

Correct Answer :D

## Explanation

Number of ways in which 8 books can be arranged =  $8!$

Number of ways when three particular books are together =  $6! \times 3!$

Therefore Number of ways when three particular books are not together =  $8! - 6! \times 3!$

$$= 6!(7 \times 8 - 3 \times 2)$$

$$= 6! \times 50 = 720 \times 50 = 36000$$

Hence, option D is correct.

**#561** [Explained](#) [Report](#) [Bookmark](#)

The perimeter of a rectangle is equal to the perimeter of a square whose diagonal is  $17\sqrt{2}$  m. If the difference between the length and breadth of rectangle is 10m, find the area of the rectangle in  $m^2$  ?

- **A**260
- **B**264
- **C**210
- **D**230

**Correct Answer :B**

## Explanation

The diagonal of the square =  $a\sqrt{2}$



$$a\sqrt{2} = 17\sqrt{2}$$

$$a = 17$$

$$\text{Perimeter of the square} = 17 \times 4 = 68 \text{ m}$$

$$\text{Perimeter of the rectangle} = 68 \text{ m}$$

$$L - B = 10$$

$$2(L+B) = 68$$

$$L + B = 34$$

By solving equations we get,

$L = 22 \text{ m}$ ,  $B = 12 \text{ m}$

Area of the rectangle =  $22 \times 12 = 264 \text{ m}^2$

Hence, option B is correct.

**#562** Explained Report Bookmark

A student was asked to multiply a number by  $\frac{5}{4}$  but he divided that number by  $\frac{5}{4}$ . His result was therefore 27 less than the correct answer. Find the number.

- **A**48
- **B**60
- **C**45
- **D**42

**Correct Answer :B**

## Explanation

**#563** Explained Report Bookmark

If the digits of a two digit number are interchanged the number so obtained is greater than the original number by 18. If the sum of the two digits of the number is 8, find 55% of the original number?

- **A**19.25
- **B**9.35

- **C** 14.3
- **D** 29.15

**Correct Answer :A**

## Explanation

The two digits in which the sum of the digits is 8 are 17, 26, 35, 44. Here,  $53 - 35 = 18$  So the original number is 35.  $55\%$  of the original number  $= [ ( 55 * 35 ) / 100 ] = 19.25$

**#564** [Explained](#) [Report](#) [Bookmark](#)

Amit sells a computer to Bhanu at a loss of 10% who sells it to Charan at a profit of 20%. After finding some defect Charan returned it back to Bhanu but could only recover Rs. 4 for every Rs. 5 he had paid. If Amit had paid Rs. 90,000 for the computer, then find the amount received by Charan while returning the computer to Bhanu.

- **A** Rs. 18440
- **B** Rs. 19440
- **C** Rs. 77760
- **D** Rs. 67500

**Correct Answer :C**

## Explanation

**#565** [Explained](#) [Report](#) [Bookmark](#)

Ronny and Pankaj spent 70% and 75% of their respective salaries. Pankaj kept 60% of the remaining as savings and gave the remaining Rs. 5100 to his mother.

What was Ronny's monthly expenditure if his monthly salary was 20% less than that of Pankaj?

- **A**Rs. 71400
- **B**Rs. 28560
- **C**Rs. 62340
- **D**Rs. 24400

**Correct Answer :B**

## Explanation

Let the monthly salary of Pankaj be 100%

He spends 75% and saves 25%

He keeps 60% of 25% i.e., 15% as savings.

The remaining i.e., 40% of 25% = 10%

He gives 5100 i.e., 10% to his mother.

The value of 10% of his salary = 5100

Value of 100% = 51000

Pankaj's salary = Rs. 51000

Monthly salary of Ronny is 20% less than that of Pankaj.

Monthly salary of Ronny =  $[(51000 \times 4) / 5] = 40800$

Ronny's monthly expenditure =  $[(40800 \times 7) / 10] = 28560$

**#566** [Explained](#) [Report](#) [Bookmark](#)

A water tank X can be filled by an inlet pipe in some hours. The same inlet pipe can fill another water tank Y of capacity 8000 litre in 16 hours. If the inlet pipe and an outlet pipe are opened together to fill the water tank X then they together take 7.5 hours but the outlet pipe alone can empty the water tank Y in 24 hours. What is the capacity ( in litres ) of the water tank X?

- **A** 750
- **B** 1200
- **C** 1250
- **D** 1500

Correct Answer :C

## Explanation

#567 [Explained](#) [Report](#) [Bookmark](#)

The total income of Ramesh, Suresh and Dinesh is Rs. 17325. Ramesh spend 70%, Suresh spend 75% and Dinesh spend 80% of their income. The ratio of their saving is 6 : 8 : 5. What is the income of Dinesh?

- **A**Rs. 4500
- **B**Rs. 5625
- **C**Rs. 7200
- **D**Rs. 4800

Correct Answer :B

## Explanation

The ratio of the saving = 6 : 8 : 5

So the saving of Ramesh, Suresh and Dinesh is 6x, 8x, 5x.

The saving of Ramesh is  $(100 - 70)\% = 30\%$  that is 6x. So the income is  $6x \div 30 \times 100 = 20x$

The saving of Suresh is  $(100 - 75)\% = 25\%$  that is  $8x$ . So the income is  $8x \div 25 \times 100 = 32x$

The saving of Dinesh is  $(100 - 80)\% = 20\%$  that is  $5x$ . So the income is  $5x \div 20 \times 100 = 25x$

Total income =  $20x + 32x + 25x$

$17325 = 77x$

$x = 225$

Dinesh's income =  $25 \times 225 = \text{Rs. } 5625$ .

Hence, option B is correct.

**#568** Explained Report Bookmark

When a plot is sold for Rs. 18,700, the owner loses 15%. At what price must that plot be sold in order to gain 15%?

- **A**Rs. 21,000
- **B**Rs. 22,500
- **C**Rs. 25,300
- **D**Rs. 25,800

**Correct Answer :C**

## Explanation

$$85 : 18700 = 115 : x$$

**#569** **Explained** **Report** **Bookmark**

The average age of the 20 aspirants of a class is 19.2 years. After Some time two more aspirants join them and then average is increased by 0.3 years. Find the difference between the age of new aspirants.

- **A**12
- **B**15
- **C**8
- **D**Can't be determined

**Correct Answer :D**

## Explanation

$$\text{Total age of 20 aspirants} = 20 \times 19.2 = 384$$

$$\text{Total age of 22 aspirants} = 22 \times 19.5 = 429$$



Total Age of new aspirants =  $429 - 384 = 45$  years

But we can not find the difference of the new aspirants'. So answer is can't be determined.

Hence, option D is correct.

**#570** [Explained](#) [Report](#) [Bookmark](#)

A boy went from his house to school and covered half of the distance between his house and school at 25% more than the usual speed and the remaining half of the distance at 25% less than the usual speed thereby took 1 hours more than the usual time. What was the ratio of the numerical value of total distance and that of his usual speed?

- **A** 1 : 30
- **B** 15 : 1
- **C** 30 : 1
- **D** 60 : 1

**Correct Answer :B**

## Explanation

**#571** [Explained](#) [Report](#) [Bookmark](#)

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?

- **A** 30 days
- **B** 40 days
- **C** 60 days
- **D** 70 days

**Correct Answer :C**

## Explanation

**#572** **Explained** **Report** **Bookmark**

The discount series of 15%, 20% and 30% is equal to a single discount of:

- **A** 50%
- **B** 52.80%
- **C** 52.40%
- **D** 53.40%

**Correct Answer :C**

## Explanation

**#573** Explained Report Bookmark

The cost price of an article is Rs. 400. A shopkeeper marked the price 2x percentage above the cost price and gave x% discount on the marked price and earned a profit of Rs. 48. If he had not given discount and had sold the article on the marked price then how much more profit he would have earned?

- **A** 160
- **B** 152
- **C** 112
- **D** 124

**Correct Answer :C**

## Explanation

**#574** Explained Report Bookmark

Pipe P can fill an empty tank in 4 hours but pipe Q can completely empty the same tank in 8 hours. Both the pipes were opened alternately after every two hours starting with pipe P then in how many hours, the tank was completely filled?

- **A** 6 hours
- **B** 5 hours
- **C** 10 hours
- **D** 12 hours

**Correct Answer :C**

## Explanation

Let the capacity of the water tank = lcm of 4 and 8 = 16 units The efficiency of pipe P =  $(16 / 4) = 4$  units per hour The efficiency of pipe q =  $(16 / 8) = 2$  units per hour In the first 2 hours, the units of water filled =  $4 \times 2 = 8$  units In the next 2 hours, the units of water withdraws =  $2 \times 2 = 4$  units It means, in one cycle i.e. 4 hours, the total quantity of water filled = 4 units In the next cycle, the total quantity of water will be filled =  $4 \times 2 = 8$  units The remaining quantity =  $16 - 8 = 8$  units In the next 2 hours, pipe P can fill 8 units of water Therefore, the total time =  $8 + 2 = 10$  hours Hence, option C is correct.

#575 **Explained** **Report** **Bookmark**

Ayesha's father was 38 years of age when she was born while her mother was 36 years old when her brother four years younger to her was born. What is the difference between the ages of her parents?

- **A** 2 years
- **B** 4 years
- **C** 6 years
- **D** 8 years

**Correct Answer :C**

## Explanation

Mother's age when Ayesha's brother was born = 36 years.

Father's age when Ayesha's brother was born =  $(38 + 4)$  years = 42 years.

$\therefore$  Required difference =  $(42 - 36)$  years = 6 years.

**#576** Explained Report Bookmark

The speed of a passenger train is 25% less than that of the express train. 4 hours after the passenger train starts from a station, the express train starts from the same station and completely crosses the passenger in another R hours. What is the value of R ?

- **A**10
- **B**12
- **C**15
- **D**08

**Correct Answer :B**

## Explanation

Let the speed of express train =  $4x$  km per hour  
The speed of passenger train = 75% of  $4x = 3x$  km per hour  
4 hours after the passenger train start from a station, the express train start from the same station  
The distance between the passenger train and express train =  $3x \times 4 = 12x$  km  
The relative speed of passenger train and express train =  $4x - 3x = x$  km per hour  
The time taken by the express train to completely cross the passenger train =  $(12x / x) = 12$  hours

**#577** Explained Report Bookmark

A farmer has some number of cows and n number of cattle houses. He can tie 12 cows with equal number of cows in each cattle house or 8 cows with equal number of cows in each cattle house. What is the minimum possible number of cows the farmer has?

- **A**36
- **B**48
- **C**60

- **D**24

Correct Answer :D

## Explanation

The minimum possible number of cows the farmer has = LCM of 8 and 12 = 24

Hence, option D is correct.

**#578** [Explained](#) [Report](#) [Bookmark](#)

A sum fetches a simple interest of Rs. 6000 at the rate of 5% p.a. in 6 years. What would be the compound interest earned at the same rate of interest and the same principal in 2 years?

- **A**Rs. 2500
- **B**Rs. 2125
- **C**Rs. 2245
- **D**Rs. 2050

Correct Answer :D

## Explanation

**#579** [Explained](#) [Report](#) [Bookmark](#)

In a college Anjana scored 80 marks out of 150 in History and 95 marks out of 120 in English. If she wants to score 70% marks in 3 subjects, find the minimum marks she should score in Geography out of 100.

- A70
- B55
- C76
- D84

**Correct Answer :D**

## Explanation

Total maximum marks =  $100 + 120 + 150 = 370$

Total marks in History and English =  $95 + 80 = 175$

Total marks required by her to get 70% =  $370 \times 70\% = 259$

So, she needs  $259 - 175 = 84$  marks to score 70%.

**#580** [Explained](#) [Report](#) [Bookmark](#)

If a person sells a radio on the marked price then he earns total profit of Rs. x. if he sells the same radio for 30% discount on the marked price then he earns Rs. y but if he gives two successive discounts of 20% and 10% then he earns Rs. z.

if the difference between Y and Z is Rs. 18 and the cost price of the radio is Rs. 500 then find the sum (in Rs.) of x, y, and z?648

- **A**648
- **B**678
- **C**712
- **D**672

**Correct Answer :B**

## Explanation

Let the marked price = Rs. 100a

At no discount,

$$\text{Profit} = x = 100a - 500 \dots\dots\dots (i)$$

At 30% discount,

$$\text{The selling price} = 70\% \text{ of } 100a = 70a$$

$$\text{Profit} = y = 70a - 500 \dots\dots\dots (ii)$$



At 20% and 10% two successive discount

$$= [ ( 20 + 10 - 20 * 10 ) / 100 ] = 28\% \text{ discount}$$

The selling price = 72% of  $100x = 72x$

$$\text{Profit} = z = 72a - 500 \text{----- (iii)}$$

$$y - z = \text{equation (iii)} - \text{(ii)}$$

$$= 2a = 18$$

$$A = 9$$

Then from the equation (i)

$$x = 900 - 500 = 400$$

From the equation (ii)

$$y = 630 - 500 = 130$$

From the equation (iii)

$$z = 648 - 500 = 148$$

The required sum =  $400 + 130 + 148 = 678$

**#581** [Explained](#) [Report](#) [Bookmark](#)

Ram takes Rs. 5000 from Mohan for 3 years under simple interest at the rate of 10% per annum calculated half-yearly. What amount will be paid by Ram to Mohan after the end of 3 years?

- **A** Rs. 9000

- **B** Rs. 3000
- **C** Rs. 6500
- **D** Rs. 7500

**Correct Answer :C**

## Explanation

**#582** [Explained](#) [Report](#) [Bookmark](#)

A person purchased firecrackers of worth Rs. 6000. He sold  $\frac{1}{3}$ rd part of the firecrackers at 100% profit,  $\frac{1}{2}$ nd part of the remaining at 50% profit and the remaining part he burst himself. What was his total profit percentage?

- **A** 16.67%
- **B** 18.33%
- **C** 20.33%
- **D** 12.67%

**Correct Answer :A**

## Explanation

**#583** [Explained](#) [Report](#) [Bookmark](#)

Ram divided his total property between his two sons. The elder son received 70% of the total property. If the elder son donates Rs. 8500 in charity then the total property remained with him will be 20% more than that of younger son. What was the difference between the total property received by the elder son and that by younger son?

- **A**Rs. 7500
- **B**Rs. 12500
- **C**Rs. 15000
- **D**Rs. 10000

**Correct Answer :D**

## Explanation

Let the total property Ram had =  $100x$

The property received by elder son =  $70\%$  of  $100x = 70x$

The property received by younger son =  $100x - 70x = 30x$

20% more than  $30x = 120\%$  of  $30x = 36x$

According to the question,  $70x - 36x = 34x = 8500$

$x = 250$

The difference between the total property received by the elder son and that by younger son =  $70x - 30x = 40x = 250 \times 40 = 10,000$

#584 **Explained** **Report** **Bookmark**

In a group of 4 women the average weight of which is 40 kg, when two new women, the difference of whom weight was 14 kg, joined then the average age of all the women was increased by 10%. What would have been the average if only fatter woman had joined the group?

- **A** 43.6 kg
- **B** 43.8 kg
- **C** 43.4 kg
- **D** 43.5 kg

**Correct Answer :B**

## Explanation

Let A and B joined the group

Let the weight A = x kg

Then the weight of B =  $x + 14$  kg

The sum of the weight of 4 women =  $40 \times 4 = 160$  kg

$$10\% \text{ of } 40 = 4 \text{ kg}$$

$$\text{The sum of the weight of 6 women} = 44 \times 6 = 264 \text{ kg}$$

The weight of two new joiner,

$$160 + x + x + 14 = 264$$

$$2x = 90$$

$$x = 45$$

$$\text{If the fatter woman had joined the group} = 160 + 45 + 14 = 219 \text{ kg}$$

$$\text{The average} = ( 219 / 5 ) = 43.8 \text{ kg}$$

**#585** Explained Report Bookmark

In a school, one – fourth of the total number of boys and three – fourth of the total number of girls participated in Annual function of the school. If 200 students had not participated in the annual function of the school then what was the total number of students in the school?

- **A** 500
- **B** 600
- **C** 800
- **D** Can't be determined

Correct Answer :D

## Explanation

In the question, the total number of students who had not participated in the annual function is given but we don't know the number of boys and girls therefore, answer could not be determined.

**#586** Explained Report Bookmark

If the fractions  $\frac{1}{2}$ ,  $\frac{2}{3}$ ,  $\frac{5}{9}$ ,  $\frac{6}{13}$ , and  $\frac{7}{9}$  are arranged in ascending order of their values, which one will be the fourth?

- **A**  
 $\frac{2}{3}$
- **B**  
 $\frac{5}{9}$
- **C**  
 $\frac{6}{13}$
- **D**  
 $\frac{1}{2}$

Correct Answer :A

## Explanation

The given fractions in ascending order:  $\frac{6}{13}$ ,  $\frac{1}{2}$ ,  $\frac{5}{9}$ ,  $\frac{2}{3}$ ,  $\frac{7}{9}$ .

#587 [Explained](#) [Report](#) [Bookmark](#)

Find the least number which when divided by 12, 27 and 35 leaves 6 as a remainder?

null

- **A**  
3586
- **B**  
3756
- **C**  
3786
- **D**  
4786

Correct Answer :C

## Explanation

what we should find here is lcm of these 3 no.s and then add 6 to it

lcm of 12,35 and 27

$$12=3*2*2$$

$$27=3*3*3$$



$$35=5*7$$

hence the lcm is 3780

thus the no is  $3780+6=3786$

hence the option is c.

**#588** Explained Report Bookmark

The sum of two number is 528 and their HCF is 33. How many pairs of such numbers can be?

null

- **A**  
1
- **B**  
2
- **C**  
3
- **D**  
4

Correct Answer :D

## Explanation

Let the numbers be  $33a$  and  $33b$ , where  $a$  and  $b$  are co-primes.

Then,  $33a+33b=528$

$$33(a+b)=528$$

$$a+b=16$$

Therefore,

$$(a=1,b=15),(a=3,b=13),(a=5,b=11),(a=7,b=9)$$

Possible number of pairs = 4

**#589** [Explained](#) [Report](#) [Bookmark](#)

18 years ago, a man was three times as old as his son. Now, the man is twice as old as his son. The sum of the present ages of the man and his son is \_\_\_\_\_

null

- **A**  
54 years
- **B**  
72 years
- **C**  
105 years
- **D**  
108 years

**Correct Answer :D**

## Explanation

Let the son's age 18 years ago be  $x$  years,

Then man's age 18 years ago =  $3x$  years

$$(3x+18)=2(x+18)$$

$$\Rightarrow 3x+18=2x+36$$

$$\Rightarrow x = 18(3x + 18) = 2(x + 18)$$

$$\Rightarrow 3x + 18 = 2x + 36$$

$$\Rightarrow x = 18$$

Sum of their present ages

$$\Rightarrow (3x + 18 + x + 18) \text{ years}$$

$$\Rightarrow (4x + 36) \text{ years}$$

$$\Rightarrow (4 \times 18 + 36) \text{ years}$$

$$\Rightarrow 108 \text{ years}$$

**#590** [Explained](#) [Report](#) [Bookmark](#)

The average weight of 20 people is increased by 2.2 kg when one man weight 53 kg is replaced by another man. Find the weight of new man?

null

- **A**  
87 Kg
- **B**  
93 Kg
- **C**  
95 Kg
- **D**  
97 Kg

Correct Answer :D

## Explanation

Average = 2.2, Number of people (n) = 20

Average = Total sum/n

Total weight increased =  $2.2 \times 20 = 44$  kg

Weight of new man =  $44 + 53 = 97$  kg

**#591** [Explained](#) [Report](#) [Bookmark](#)

60 percent of the employees of a company are women and 75% of the women earn 20000 or more in a month. Total number of employees who earns more than 20000 per month in the company is 60 percent of the total employees. What fraction of men earns less than 20000 per month?

null

- **A**  
5/8
- **B**  
5/4
- **C**  
3/8
- **D**  
7/18

Correct Answer :A

## Explanation

Let total no. of employee are 100

60 women 40 men

75% of women earn more than 20000

75% of 60 = 45 women earn 20000 or more

15 women earn less than 20000

now total employee earn 20000 more is 60%

60% of 100 = 60 employees earn 20000 or more

40 employees earn less than 20000

in 60 employees 45 are women so

60-45= 15 there are 15 men who earn more than 20000

total 40 -15= 25 men earn less than 20000

so fraction is man earn less than 20000

25/40 on simplification we get 5/8 Ans

**#592** Explained Report Bookmark

Two equal vessels A and B contain 60% of sugar and 40% of sugar respectively and the remaining Rava. In which 40 kg of mixture is taken out from vessel A and replaced into vessel B. Find the initial quantity of vessel if the final ratio of sugar and Rava in vessel B is 16 : 19.

null

- **A**  
120 litres
- **B**  
150 litres
- **C**  
80 litres
- **D**  
100 litres

**Correct Answer :D**

## Explanation

Vessel A Sugar and Rava ratio = 3 : 2

Vessel B sugar and Rava ratio = 2 : 3

Given,

$$(2x + 24)/(3x + 16) = 16/19$$

$$38x + 456 = 48x + 256$$

$$10x = 200$$

$$x = 20 \text{ litres}$$

$$\text{Initial quantity} = x \times 5 = 100 \text{ litres}$$

**#593** [Explained](#) [Report](#) [Bookmark](#)

A man would gain 25% by selling a chair for Rs. 47.5 and would gain 15% by selling a table for Rs. 57.5. He sells the chair for Rs. 45; what is the least price for which he must sell the table to avoid any loss on the two together?

null

- **A**  
Rs 41.2
- **B**  
Rs 42.2
- **C**  
Rs 43
- **D**  
Rs 45.2

**Correct Answer :C**

## Explanation

Cost Price of chair =  $100/125 * 47.5 = 38$  Rs.

Cost Price of table =  $100/115 * 57.5 = 50$  Rs.

Required SP of table =  $(50 + 38) - 45 = 43$  Rs.

**#594** [Explained](#) [Report](#) [Bookmark](#)

It takes 6 workers a total of 10 hours to assemble a computer, with each working at the same rate. If six workers start at 9.00 am, and one worker per hour is added beginning at 3.00 pm, at what time will the computer assembled?

null

- **A**  
5.00 PM
- **B**  
4.00 PM
- **C**  
6.00 PM
- **D**  
9.00 PM

**Correct Answer :C**

## Explanation

Required man-hours =  $6 \times 10 = 60$  mh

If just 6 workers are employed, the job will be completed at 7:00 pm.

Up to 3:00 pm, 36 mh used, 7th hour will use 7 mh, 8th hour will use 8 mh and 9th hour will use 9 mh. So, after 3:00 pm, three hours are required.

Job will be completed by 6:00 pm.

**#595** [Explained](#) [Report](#) [Bookmark](#)

Two pipes A and B can fill a tank in 20 and 30 minutes respectively. If both the pipes are used together, then how long it will take to fill the tank ?

null

- **A**  
10 mins
- **B**  
12 mins
- **C**  
15 mins
- **D**  
20 mins

**Correct Answer :B**

## Explanation

In this type of questions we first get the filling in 1 minute for both pipes then we will add them to get the result, as



Part filled by A in 1 min =  $\frac{1}{20}$

Part filled by B in 1 min =  $\frac{1}{30}$

Part filled by (A+B) in 1 min =  $\frac{1}{20} + \frac{1}{30}$

=  $\frac{1}{12}$

So both pipes can fill the tank in 12 mins.

**#596** [Explained](#) [Report](#) [Bookmark](#)

In a dairy farm, 40 cows eat 40 bags of husk in 40 days. In how many days one cow will eat one bag of husk.

null

- **A**  
44 Days
- **B**  
45 Days
- **C**  
40 Days
- **D**  
48 Days

**Correct Answer :C**

## Explanation

Let the required number of days be  $x$ .

*Less cows, More days (Indirect Proportion)*

*Less bags, Less days (Direct Proportion)*

cows 1:40 :40:xbags 40:1 :40:xcows 1:40 :40:xbags 40:1 :40:x

$$1 \times 40 \times x = 40 \times 1 \times 40$$

$$\Rightarrow x = 40.$$

**#597** [Explained](#) [Report](#) [Bookmark](#)

A truck covers a distance of 376 km at a certain speed in 8 hours. How much time would a car take at an average speed which is 18 kmph more than that of the speed of the truck to cover a distance which is 14 km more than that travelled by the truck ?

null

- **A**  
6 hours
- **B**  
8 hours
- **C**  
4 hours
- **D**  
5 hours

**Correct Answer :A**

## Explanation

Average speed of truck = Distance/time =  $376/8 = 47\text{km/hr}$

if car's avg speed is 18kmph more than truck's speed, then car's speed is 65kmph

distance covered by car is 14km more than travelled by truck

i.e.  $376+14= 390\text{km}$

time taken by car to cover 390km with an average speed of 65kmph is  $390/65 = 6\text{hr}$

**#598** [Explained](#) [Report](#) [Bookmark](#)

**A train is 100 meter long and is running at the speed of 30 km per hour. Find the time it will take to pass a man standing at a crossing**

null

- **A**  
10 seconds
- **B**  
12 seconds
- **C**  
14 seconds
- **D**  
16 seconds

**Correct Answer :B**

## Explanation

As we need to get answer in seconds, so never forget to convert speed into meter per second.

$$\text{Speed} = 30 \text{ km/hr} = 30 \times \frac{5}{18} \text{ m/sec}$$

$$= \frac{25}{3} \text{ m/sec}$$

$$\text{Distance} = \text{length of train} = 100 \text{ meter}$$

$$\text{Required time} = \frac{\text{Distance}}{\text{Speed}}$$

$$= \frac{100}{(25/3)}$$

$$= 100 \times \frac{3}{25}$$

$$= 4 \times 3$$

$$= 12 \text{ sec}$$

**#599** [Explained](#) [Report](#) [Bookmark](#)

Shubhanshu deposited Rs 8000 at simple interest which amounted to Rs 9200 after 3 years . Had the interest been 2% more, how much amount she would have got?

null

- **A**  
Rs 1680
- **B**  
Rs 9680

- **C**  
Rs 9272
- **D**  
Rs 2680

**Correct Answer :B**

## Explanation

Total gain in three year with simple interest = 1200.

Hence gain in a year =400. Hence rate of interest will be  $(400/8000) \times 100 = 5\%$

Total gain in three year with rate of interest on 7% (i.e.5+2) will be  $8000 \times 3 \times 7 / 100 = 1680$ .

Total amount she will get will be  $8000 + 1680 = \text{Rs.}9680$

**#600** **Explained** **Report** **Bookmark**

**A-clock gains five minutes every hour. What will be the angle traversed by the second hand in one minute?**

null

- **A**  
360°
- **B**  
360.5°
- **C**  
390°
- **D**  
380°

**Correct Answer :C**

## Explanation

Assume the clock is a circle. Also, assume that the second hand's continuous motion is the cause of the problem and not the tick of the minute hand.

The second hand normally traverses 360 degrees in one minute. We would expect, then, for the second hand to travel 21,600 degrees in one hour.

If the clock gains five minutes every hour, the second hand is rotating for an additional five minutes that have not occurred.

This means it has rotated 360 degrees five extra times.

$$21,600^{\circ} + (5)(360^{\circ}) = 23,400^{\circ}$$

Divide this by 60 seconds per minute to yield:

$$390^{\circ}$$

**#601** [Explained](#) [Report](#) [Bookmark](#)

Find the total number of factors of 15120 ?

- **A**  
50
- **B**  
30
- **C**  
80
- **D**  
70

**Correct Answer :C**

## Explanation

### SOLUTION

If a composite no. N has been written in the form of

$$N = a^p \times b^q \times c^r \times d^s \dots\dots\dots$$

Then the no. of total division or factors of

$$N = (p + 1)(q + 1)(r + 1)(s + 1) \dots\dots$$

Hence,

$$\begin{aligned} 15120 &= 2^4 \times 3^3 \times 5^1 \times 7^1 \text{Total no. of factors} \\ &= (4 + 1)(3 + 1)(1 + 1)(1 + 1) = 80. \end{aligned}$$

#602 [Explained](#) [Report](#) [Bookmark](#)

Four Iron metal rods of lengths 78 cm, 104 cm, 117 cm and 169 cm are to be cut into parts of equal length. Each part must be as long as possible. What is the maximum number of pieces that can be cut?

- **A**  
27
- **B**  
36
- **C**  
43
- **D**  
400

Correct Answer :B

## Explanation

Given, length of four metal rods are 78, 104, 117 and 169 cm.

Now,

$$78 = 13 \times 2 \times 3,$$

$$104 = 13 \times 2 \times 2 \times 2,$$

$$117 = 13 \times 3 \times 3,$$

$$169 = 13 \times 13$$

Length of each piece of rod as long as possible, HCF = 13 CM

$$\therefore \text{Number of piece} = 6 + 8 + 9 + 13 = 36$$

**#603** [Explained](#) [Report](#) [Bookmark](#)

**Find the highest common factor of 1.08, 0.36, 0.90**

null

- **A**  
0.12
- **B**  
0.18
- **C**  
0.6
- **D**  
0.63



**Correct Answer :B**

## Explanation

Given numbers are 1.08, 0.36 and 0.90. H.C.F. of 108, 36 and 90 is 18,

$\therefore$  H.C.F. of given numbers = 0.18.

**#604** [Explained](#) [Report](#) [Bookmark](#)

**What is the day on 22nd April 2222 ?**

- **A**  
Tuesday
- **B**  
Monday
- **C**  
Sunday
- **D**  
Thursday

**Correct Answer :B**

## Explanation

22 Apr 2222 = (2221 years + period from 1-Jan-2222 to 22-Apr-2222)

We know that number of odd days in 400 years = 0

Hence the number of odd days in 2000 years = 0 (Since 2000 is a perfect multiple of 400)

Number of odd days in the period 2001-2200

= Number of odd days in 200 years

$$= 5 \times 2 = 10 = 3$$

(As we can reduce perfect multiples of 7 from odd days without affecting anything)

Number of odd days in the period 2201-2221

= 16 normal years + 5 leap years

$$= 16 \times 1 + 5 \times 2 = 16 + 10 = 26 = 5 \text{ odd days}$$

Number of days from 1-Jan-2222 to 22 Apr 2222

$$= 31 \text{ (Jan)} + 28 \text{ (Feb)} + 31 \text{ (Mar)} + 22 \text{ (Apr)} = 112$$

112 days = 0 odd day

Total number of odd days =  $(0 + 3 + 5 + 0) = 8 = 1 \text{ odd day}$

1 odd days = Monday

Hence 22 Apr 2222 is Monday

**#605** [Explained](#) [Report](#) [Bookmark](#)

The average of eight numbers is 25, out of which average of first two numbers is  $(39/2)$  and the average of the next three numbers is  $(70/3)$ . The sixth number is less than the seventh and the eighth by 5 and 8 respectively. Find the seventh number.

- **A**  
31

- **B**  
33
- **C**  
35
- **D**  
37

Correct Answer :A

## Explanation

1] Let No. are 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H'

$$(A+B+C+D+E+F+G+H)/8 = 25$$

$$\therefore A+B+C+D+E+F+G+H = 200$$

$$\frac{A+B}{2} = \frac{39}{2} \therefore A+B = 39, \frac{C+D+E}{3} = \frac{70}{3} \Rightarrow C+D+E = 70$$

$$G = 5+F, H = 8+F$$

$$\begin{array}{r} A+B+C+D+E+F+G+H = 200 \\ \underline{39} \quad \underline{70} \quad \underline{F} \quad \underline{5+F} \quad \underline{8+F} \\ 122 + 3F = 200 \\ 3F = 78 \\ F = 26 \end{array}$$

7<sup>th</sup> number is G

$$\therefore G = 5+F = 26+5 = 31$$

A vendor sells 60 percent of apples he had and throws away 15 percent of the remainder. Next day he sells 50 percent of the remainder and throws away the rest. What percent of his apples does the vendor throw?

null

- **A**  
26%
- **B**  
23%
- **C**  
25%
- **D**  
27%

Correct Answer :B

## Explanation

let initial apple be 100

he sold 60 apples and threw 15% of 40 apples

i.e.,  $(15 \div 100) \times 40 = 6$  apples

nxt day from remaining 34 apples

he sold 50% i.e., 17 apples and threw rest 17 apples...

so total no. of apples thrown is  $6 + 17 = 23$  apples

% apples thrown is  $(23 \div 100) \times 100\% = 23\%$ .

#607 **Explained** **Report** **Bookmark**

In a mixture of milk and water of volume 30 litres, the ratio of milk and water is 7 : 3. How much quantity of water is to be added to the mixture to make the ratio of milk and water 1 : 2 ?

null

- **A**  
30 liters
- **B**  
32 liters
- **C**  
33 liters
- **D**  
35 liters

Correct Answer :C

## Explanation

Here, Let water =  $7x$  and milk =  $3x$ .

Now,

$$7x + 3x = 30.$$

$$x = 3.$$

So, water =  $7x = 7 \times 3 = 21$  liter.

**Milk =  $3x = 3 \times 3 = 9$  liter.**

**Now, we keep milk constant and add water to mixture to get ratio 6:1.**

**Let water in this mixture =  $6y$  and milk =  $y$ .**

**We have, milk = 9 liter, so  $y = 9$  liter.**

**Water =  $6y = 6 \times 9 = 54$  liter.**

**Then extra water to be added is 33 liter.**

**#608** [Explained](#) [Report](#) [Bookmark](#)

**Vicky bought a new wall clock on Monday and set the correct time as 10 a.m. on it and fixed it on a wall. The same clock loses 15 minutes in 24 hours. What will be the true time if the clock indicates 4 a.m. on the following Sunday?**

- **A**  
5:27am
- **B**  
5:12am

- **C**  
6:00am
- **D**  
5:02am

Correct Answer :A

## Explanation

Time from Monday 10 a.m. to Sunday 4 a.m. = 138 hours.  
 Now 23 hr. 45 min. of this clock = 24 hours of correct clock.  
 $\therefore 23 \text{ hr. } 45 \text{ min. can be written as } \rightarrow 23 \frac{45}{60} \rightarrow \frac{1425}{60} = \frac{285}{12}$   
 $\therefore \frac{285}{12} \text{ hrs of this clock} = 24 \text{ hours of correct clock.}$   
 $138 \text{ hours of this clock} = \left[ 24 \times \frac{12}{285} \times 138 \right] \text{ hrs of correct clock.}$   
 $= 139 \text{ hrs } 27 \text{ mins}$   
 $\therefore \text{Correct time is } 5.27 \text{ am}$

#609 **Explained** **Report** **Bookmark**

Radhe does 70% of some work in 15 days. Later, with Shyam's help, she completes the remaining work in 4 days. In how many days can Shyam alone complete the entire work?

null

- **A**  
33.3 days
- **B**  
38.3 days
- **C**  
35.3 days

- **D**  
45.3 days

Correct Answer :C

## Explanation

Let total work = 150 units

Since Radhe does 70% of the work (i.e. 105 units) in 15 days,

Radhe =  $105/15 = 7$  units per day

Work left =  $150 - 105 = 45$  units

Let Shyam do  $x$  units of work per day. Shyam and Radhe finish the pending work in 4 days.

$$\therefore 4(x + 7) = 45$$

$$\therefore 4x = 45 - 28 = 17 \text{ i.e. } x = 4.25 \text{ units}$$



∴ Time taken by Shyam to complete the work =  $150/4.25 = 35.29 \approx 35.3$  days

Note that 0.3 is equivalent to  $5/17$  (among the options).

#610 **Explained** **Report** **Bookmark**

A tap can fill a tank in 6 hours. After half the tank is filled then 3 more similar taps are opened. What will be total time taken to fill the tank completely

null

- **A**  
2 hours 30 mins
- **B**  
2 hours 45 mins
- **C**  
3 hours 30 mins
- **D**  
3 hours 45 mins

Correct Answer :D

## Explanation

Time is taken by one tap to fill half of the tank=3 hrs.

Part-time by the four taps in hour= $(4 \times 1/6)=2/3$ .

Remaining part= $(1 - 1/2)=1/2$ .

$$\therefore 2/3:1/4::1:x$$

$$\Rightarrow x = (1/2 \times 1 \times 3/2) = 3/4 \text{ hours i.e., 45 mins.}$$

**So, total time taken = 3hrs. 45 mins.**

**#611** [Explained](#) [Report](#) [Bookmark](#)

In a camp, there is a meal for 200 children or 120 men. If 150 children have taken the meal, how many men will be served with the remaining meal?

null

- **A**  
31
- **B**  
30
- **C**  
29
- **D**  
33

**Correct Answer :B**

## Explanation

There is a meal for 200 children

150 children have taken the meal

Remaining meal is to be catered to 50 children

Now,

200 children = 120 men

$\therefore$  50 children

$= (120/200 \times 50) \text{ men} = 30 \text{ men}$

**#612** [Explained](#) [Report](#) [Bookmark](#)

The speed of the boat in still water is 5 times that of current, it takes 1.1 hour to row to point B from point A downstream. The distance between point A and point B is 13.2 km. How much distance (in km) will it cover in 312 minutes upstream?

null

- **A**  
43.2
- **B**  
41.6
- **C**  
48
- **D**  
44.8

**Correct Answer :B**

## Explanation

Let the speed of the current be  $x$  kmph

Then speed of the boat in still water =  $5x$

$\therefore$  Downstream speed =  $(5x+x)=6x$  kmph Upstream speed =  $(5x-x)=4x$  kmph Now,  
13.2 km

A-----B

According to question,  $1.1 \times 6x = 13.2 \Rightarrow 6.6x = 13.2 \Rightarrow x = 13.2 / 6.6 \therefore x = 2 \text{ kmph}$

$\therefore$  Upstream speed =  $4x = 4 \times 2 = 8 \text{ kmph}$ .  $\therefore 312 \text{ minutes} = 515 \text{ hours} = 265 \text{ hours}$

$\therefore$  Required distance travelled upstream = Speed  $\times$  Time =  $8 \times 265 = 41.6 \text{ km}$

**#613** [Explained](#) [Report](#) [Bookmark](#)

**A train is moving at a speed of 132 km/hour. If the length of the train is 110 meters, how long will it take to cross a railway platform 165 meters long.**

null

- **A**  
7 second
- **B**  
7.5 second
- **C**  
8 second
- **D**  
8.5 second

**Correct Answer :B**

## Explanation

According to problem statement;

Speed =  $132 \text{ km/hr} = (132 \times 1000) / 3600 = 36.67 \text{ m/s}$

Total length given =  $110 \text{ meters} + 165 \text{ meters} = 275 \text{ meters}$

Time is the unknown factor.

we've a relation for velocity;

Velocity = Displacement/ time

Time = Displacement/ velocity = 275 meters/ 36.67 m/s

Time = 7.5 seconds

#614 [Explained](#) [Report](#) [Bookmark](#)

The SI on certain sum of money for 23 months at the rate of 7% per annum exceeds the SI on the same sum at 7% per annum for 19 months by Rs. 672. Then find the sum

null

- **A**  
Rs. 16800
- **B**  
Rs. 28800
- **C**  
Rs. 24400
- **D**  
Rs. 18600

**Correct Answer :B**

## Explanation

Let the principal be P

And in question rate of interest is same 7%

Time in ist case is  $1-11/12=23/12$

In 2nd case time is  $1 - \frac{7}{12} = \frac{19}{12}$

And the difference given is 672

So  $P \cdot 7 \cdot \frac{23}{1200}$ .....1st case si

$P \cdot 7 \cdot \frac{19}{1200}$ .....2nd case si

$$(P \cdot 7 \cdot \frac{23}{1200}) - (P \cdot 7 \cdot \frac{19}{1200}) = 672$$

$$7P(\frac{23}{1200} - \frac{19}{1200}) = 672$$

$$7P(\frac{4}{1200}) = 672$$

$$7P(\frac{1}{300}) = 672$$

$$7P/300 = 672$$

$$P/300 = 96$$

$$P = 300 \cdot 96 = 28800$$

SO principal is 28800

**#615** [Explained](#) [Report](#) [Bookmark](#)

How many 4 digit even number can formed by using the digits 1,3,7 and 8 only once ?

null

- **A**  
6
- **B**  
8

- **C**  
1
- **D**  
3

**Correct Answer :A**

## Explanation

six 4 digit even numbers can be formed by using the digits 1,3,7 and 8 only once,

Step-by-step explanation:

those numbers are

1378,1738,3718,3178,7318,7138

