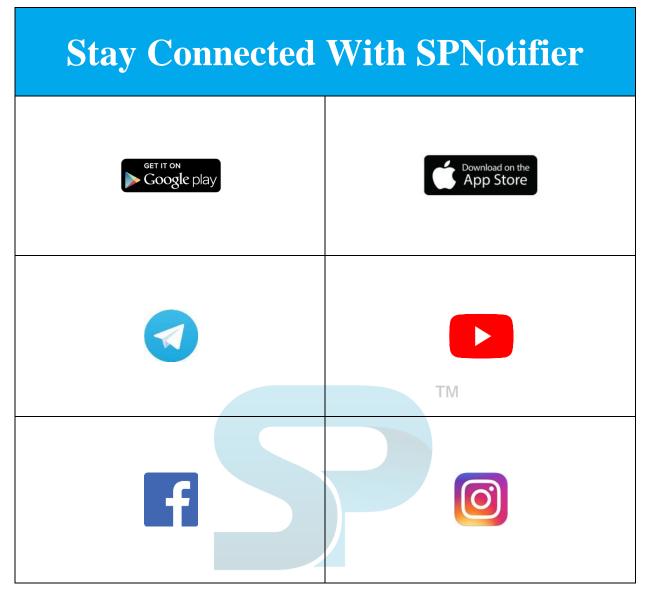






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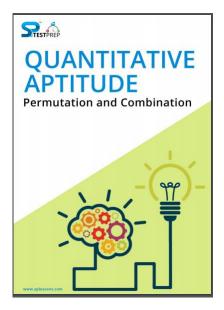
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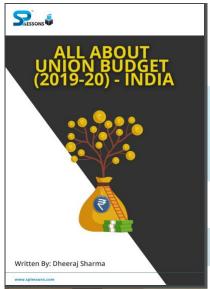


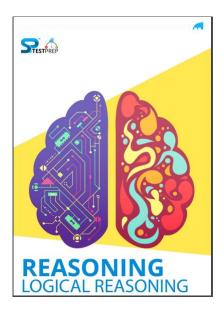
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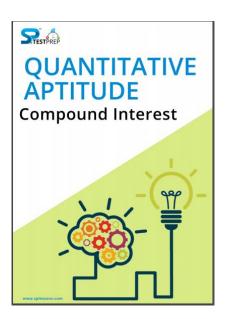




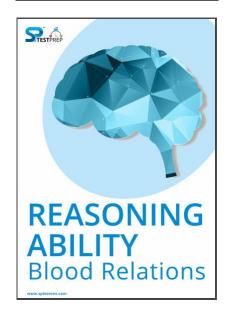






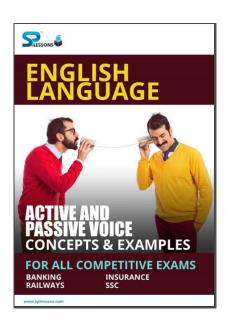


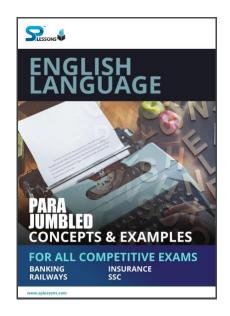












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1. A laborer was appointed by a contractor on the condition he would be paid Rs 150 for each day of his work but would be, fined the rate of Rs 30 per day for his absent. After 20 days, the contractor paid the laborer's 2820. Find the number of days he worked:

- **A.** 13 days
- **B.** 19 days
- C. 5 days
- **D.** 12 days
- E. None of these

Answer: B

Explanation: Let the required number of days =x days

So, 150x-(20-x) 30=2820

x=19 days

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2. A and B together can complete a job in 16 days. Both B and C, working alone can finish the same job in 12 days, A and B commence work on the job, and work for 4 days, where upon A leaves, B continues for 2 more days, and then he leaves too, C now starts working, and finishes the job. How many days will C require?

- A. 5 days
- **B.** 8 days
- C. 3 days
- **D.** 7 days
- E. None of these

Answer: D

Explanation:

(A + B)' 4 days work =
$$\frac{4}{16} = \frac{1}{4}$$

B's 2 days work = $\frac{2}{12} = \frac{1}{6}$
 \therefore Remaining work = $1 - \left(\frac{1}{4} + \frac{1}{6}\right)$
= $\frac{7}{12}$
 $\therefore \frac{\frac{12}{4}}{\frac{1}{2}} = 7$ days = days that C require



- 3. Ramesh can finish a job in 20 days. He worked for 10 days alone and completed the remaining job working with Dinesh, in 2 days. How many days would both Dinesh and Ramesh together take to complete the entire job?
 - **A.** 4
 - **B.** 5
 - **C.** 10
 - **D.** 12
 - E. None of these

Answer: A

Explanation: Ramesh alone finished 1/2 of the work in 10 days.

Remaining 1/2 was finished by Ramesh and Dinesh together in 2 days.

Therefore, they both together can finish the complete job in 4 days. TM

- 4. A seller calculated his intended selling price at 6% profit on the cost of a product. However, owing to some mistake while selling, the units and tens digits of the selling price got interchanged. This reduced the profit by Rs. 180 and profit percentage to 2.4%. What is the cost price of the product?
 - **A.** Rs. 4500
 - **B.** Rs. 5000
 - **C.** Rs. 4750
 - **D.** Rs. 6000
 - E. None of these

Answer:

Explanation: Profit% Reduced =6 - 2.4 = 3.6%

Required cp =
$$\frac{180}{3.6} \times 100$$

= 5000/- rupees

- 5. 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?
 - **A.** Rs.250



- **B.** Rs.350
- **C.** Rs.650
- **D.** Rs.850
- E. Rs.1250

Answer: E

Explanation:
$$SP*\frac{93}{100} = 4650$$

$$SP = 5000$$

- 6. 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?
 - **A.** 5%
 - **B.** 10%
 - **C.** 15%
 - **D.** 20%
 - E. No Loss No Profit

Answer: E

Explanation: Aryan

$$Aryan = 130-130 = 0$$

- 7. A trader sells Rice to a customer at a profit of x% over the cost price, besides if he cheats his customer by giving 950 g instead of 1Kg. Thus his overall percentage is 20%. Then what is the value of x?
 - **A.** 10



- **B.** 12
- **C.** 14
- **D.** 15
- **E.** 20

Answer: C

Explanation:
$$1000*(100+\frac{X}{100}) = 950*\frac{120}{100}$$

x = 14%

- 8. Find the least number which when divided by 12, 27 and 35 leaves 6 as a remainder?
 - **A.** 3774
 - **B.** 3780
 - **C.** 3786
 - **D.** 4786
 - E. None of these

Answer: C

Explanation: Number = LCM (12, 17, 35) + 6 = 3780 + 6 = 3786

9. The HCF and LCM of two numbers is 84 and 840 respectively. If the first number is 168, find the second one

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- **A.** 420
- **B.** 360
- **C.** 210
- **D.** 480
- E. None of these

Answer: A

Explanation: LCM*HCF = a*b

840*84 = 168*b, b = 420



10. HCF and LCM of two numbers is 5 and 275 respectively and the sum of these two numbers is 80. Find the sum of the reciprocals of these numbers

- **A.** $\frac{16}{125}$
- **B.** $\frac{32}{125}$
- **C.** $\frac{33}{125}$
- **D.** $\frac{16}{125}$
- E. None of these

Answer: D

Explanation: a*b = 5*275 and a+b = 80

$$(a+b)/(a*b) = 80/(5*275) = \frac{16}{275}$$

11. Riya, Anil and Rishi start running around a circular stadium and complete one round in 15s,12s and 21s respectively. In how much time will they meet again at the starting point?

- A. 6min
- B. 7min
- C. 8min
- **D.** 9min
- E. None of these

Answer: B

Explanation: LCM (15, 12, 21) = 420 second = 7 minutes

12. $456 \div 24 * 38 - 958 + 364 = ?$

- **A.** 126
- **B.** 127
- **C.** 128
- **D.** 138
- E. None of these

Answer: C



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Explanation: 19 * 38 - 958 + 364 = 128

13. $5616 \div 18 \div 8 = ?$

- **A.** 34
- **B.** 39
- **C.** 38
- **D.** 37
- E. None of these

Answer: B

Explanation: 5616 ÷ 18 = 312

$$\frac{312}{8}$$
 = 39

14. (85410 + 36885 + 24705) ÷ 1600 =?

- **A.** 92.875
- **B.** 91.875
- **C.** 93.675
- **D.** 92.675
- E. None of these

Answer: B

Explanation: $(85410 + 36885 + 24705) = 147000; \frac{14700}{1600} = 91.875$

15. 12.5 * 14 ÷ 8.75 + 12 = 20 +?

- **A.** 14
- **B.** 11
- **C.** 12
- **D.** 18
- **E.** 15

Answer: C

Explanation: 12.5 * 1.6 = 20; 20 + 12 - 20 = 12





16. X * (523.5 + 687.5) = 24220

- **A.** 10
- **B.** 15
- **C.** 17
- **D.** 20
- **E.** 30

Answer: D

Explanation: $\frac{24220}{1211}$ = 20

17. The sum of the present ages of a Suresh and his son is 60 years. Five years ago, Suresh's age was four times the age of his son. What will be the age of Suresh's son?

- **A.** 15
- **B.** 17
- **C.** 18
- **D.** 19
- **E.** 16

Answer: A



Explanation: Present ages of son and Suresh be x and (60 -x) years respectively.

$$(60 - x) - 5 = 4(x - 5)$$

$$55 - x = 4x - 20$$

$$5x = 75$$

$$x = 15$$

18. In a college, the average age of students of a class is 15.8 years. The average age of boys in the class is 16.4 years and that of the girls is 15.4 years. The ratio of number of boys to the number of girls in the class is

- **A.** 3:5
- **B.** 2:3
- **C.** 2:1



- **D.** 2:7
- **E.** 3:2

Answer: B

Explanation: Number of boys = x

Number of boys = y

$$(X*16.4 + y*15.4)/x + y = 15.8$$

$$16.4x + 15.4y = 15.8x + 15.8y$$

$$0.6x = 0.4y$$

$$x:y = 2:3$$

19. If two times of the RIA's age in years is included to her mother's age, the total is 70 and if two times of the mother's age is included to the RIA's age, the total is 95. So what is the age of RIA's

TM



- **A.** 55
- **B.** 35
- **C.** 45
- **D.** 40
- **E.** 50



Explanation: RIA's age = x; RIA's mother age = y

$$2x+y = 70$$
 and $x+2y = 95$

$$y = 40.$$

20. Eight years ago Ravi's mother was five times older than her daughter. After Eight years Ravi's mother will be twice older than her daughter. Find the present age of Ravi?

- **A.** 18.33 years
- **B.** 12.5 years
- **C.** 16.7 years
- **D.** 13.33 years





E. 14.5 years

Answer: D

Explanation: Eight years ago, Ravi's age = x

Eight years ago, Ravi's Mother age = 5x

$$2(x+16) = 5x+16$$

$$2x+32 = 5x+16$$

$$x = \frac{16}{3}$$

Present age of Ravi = $\frac{16}{3}$ + 8 = 13.33 years

21. In a school the number of boys and girls are in the ratio of 4:7. If the number of boys are increased by 25% and the number of girls are increased by 15%. What will be the new ratio of number of boys to that of girls?

- **A.** 100:131
- **B.** 100:151
- **C.** 100:161
- **D.** 100:181
- E. None of these



Answer: C

Explanation: Boys = 4x and girls = 7x

Ratio = 4x*125/100 : 7x*115/100 = 100:161

22. When 40% percent of a number is added to another number the second number increases to its 20%. What is the ratio between the first and second number?

- **A.** 2:1
- **B.** 1:2
- **C.** 2:3
- **D.** 3:4
- E. None of these

Answer: B



Explanation:
$$\left[\frac{40}{100}\right] *a + b = \left[\frac{120}{100}\right] *b$$

$$a:b=1:2$$

- 23. An employer reduces the number of his employees in the ratio of 7:4 and increases their wages in the ratio 3:5. State whether his bill of total wages increases or decreases and in what ratio.
 - A. increases 20:21
 - B. decreases 21:20
 - C. increases 21:22
 - D. decreases 22:21
 - E. None of these

Answer: B

Explanation: Let initial employees be 7x and then 4x similarly initial wages be 3y and then 5y

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So total wage = 21xy initially and then 20xy

So wages decreases and ratio = 21:20

- 24. The average price of 80 mobile phones is Rs.30, 000. If the highest and lowest price mobile phones are sold out then the average price of remaining 78 mobile phones is Rs. 29,500. The cost of the highest mobile is Rs.80, 000. The cost of lowest price mobile is?
 - **A.** Rs. 18000
 - **B.** Rs. 15000
 - **C.** Rs. 19000
 - D. Can't be determined
 - E. None of these

Answer: C

Explanation: The price of the costliest and cheapest mobile = (80*3000) - (78*29500) = 99000

Cheapest Mobile Price = 99000 - 80000 = 19000

- 25. In a Company the average income of all the employees is Rs. 20000 per month. Recently the company announced increment of Rs. 2000 per month for all the employees. The new average income of all the employees is?
 - **A.** 22000





- **B.** 24000
- **C.** 28000
- **D.** 26000
- E. None of these

Answer: A

Explanation: Average income of all employees = 20000

New Average income of all employees = 22000(Average also increased by 2000)

26. How many kg of custard powder costing Rs. 42 per kg must be mixed with 16 kg of custard powder costing Rs. 60 per kg so that 20 % may be gained by selling the mixture at Rs. 60 per kg?

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- **A.** 11 kg
- **B.** 14 kg
- **C.** 12 kg
- **D.** 20 kg
- E. None of these

Answer: D

Explanation: SP = 60. Gain= 20%. CP = $(100/120) \times 60$. \therefore CP = 50. Ratio between the 2 varieties of custard powder = 60 - 50: 50 - 42 = 10: 8. \therefore If x is the required quantity then 10: 8 = x: $16 \Rightarrow$ x = 20 kg.

27. The difference in simple interest and compound interest on a certain sum of money in 2 years at 10 % p.a. is Rs. 50. The sum is

- **A.** Rs. 10000
- **B.** Rs. 6000
- **C.** Rs. 5000
- **D.** Rs. 2000
- E. None of these

Answer: C

Explanation: If Diff. between SI & CI for 2 years is Rs. x, then Principal = $x \left[\frac{100}{R} \right]^2 P = 50 x (100x100)/(10x10) \rightarrow P = 5000$.





28. The simple interest on a certain sum for 3 years in Rs. 225 and the compound interest on the same sum for 2 years is Rs. 165. Find the rate percent per annum.

- **A.** 20 %
- **B.** 2.5 %
- **C.** 5%
- **D.** 15 %
- **E.** 7.5%

Answer: A

Explanation: SI for 3 years = $225 \rightarrow$ SI for 1 year = $75 \therefore$ CI for 1 year = $75 \cdot$ So CI for 2nd year = $90 \cdot$ and SI for 2nd year = $75 \cdot$ Difference = $15 \cdot$ Rate of interest = $(15/75) \times 100 = 20 \%$

29. The difference in simple interest and compound interest on a certain sum of money in 3 years at 10 % p.a. is Rs. 372. The sum is

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- **A.** Rs. 8000
- **B.** Rs.9000
- **C.** Rs. 10000
- **D.** Rs. 12000
- E. None of these



Explanation: Let us assume P= Rs. 1000. SI= Rs. 300, CI = Rs. 331

Difference = 331 - 300 = Rs. 31.

Applying the unitary method, the difference Rs. 372 is 12 times Rs. 31.

Therefore, the principle will also be 12 times of Rs. 1000 i.e. Rs. 12000.

30. Three persons enter into a partnership by investing in the ratio of 4:5:8. After one year A invest more 4300 and B withdraws 3200. Now, the ratio of investment changes to 5:4:7. Approximately how much A invested initially?

- **A.** 1.14555
- **B.** 2.14655
- **C.** 3.14755





- **D.** 4.14855
- E. 5. None of these

Answer: C

Explanation: after one year - 4x+4300: 5x-3200: 8x

So, to find X - (4x+4300)/(5x-3200) = 5/4

So investment made by A = (33200/9)*4 = 14755.55

31. If A = x% of y and B = y% of x, then which of the following is true?

- A. None of these
- **B.** A is smaller than B.
- **C.** Relationship between A and B cannot be determined.
- **D.** If x is smaller than y, then A is greater than B.
- E. A is greater than B.

Answer: A

Explanation: A = $\frac{x}{100} \times y = \frac{xy}{100} \dots (1)$

$$B = \frac{y}{100} \times x = \frac{yx}{100} \dots (2)$$

Therefore A = B

32. The population of a town increased from 1, 75,000 to 2, 62,500 in a decade. What is the average percent increase of population per year?

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- **A.** 5%
- **B.** 4%
- **C.** 6%
- **D.** 50%
- **E.** 60%

Answer: A

Explanation: increase in the population in 10 years

$$= 262500 - 175000 = 87500$$

Percent increase in the population in 10 years

$$= \frac{87500}{175000} \times 100 = \frac{8750}{175} = 50\%$$

Average percent increase of population per year



$$=\frac{50\%}{10}=5\%$$

33. Out of 7 consonants and 4 vowels, how many words of 3 consonants and 2 vowels can be formed?

- **A.** 25200
- **B.** 21300
- **C.** 24400
- **D.** 210
- **E.** 50514

Answer: A

Explanation: Number of ways of selecting 3 consonants from 7 = 7_{c_3}

Number of ways of selecting 2 vowels from 4 = 4_{c_2}

Number of ways of selecting 3 consonants from 7 and 2 vowels from 4

$$=7_{c_3} \times 4_{c_2}$$

$$= \left[\frac{7 \times 6 \times 5}{3 \times 2 \times 1} \right] \times \left[\frac{4 \times 3}{2 \times 1} \right] = 210$$

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It means we can have 210 groups where each group contains total 5 letters (3 consonants and 2 vowels).

Number of ways of arranging 5 letters among themselves

$$= 5! = 5 \times 4 \times 3 \times 2 \times 1 = 120$$

Hence, required number of ways

$$= 210 \times 120 = 25200$$

34. In how many different ways can the letters of the word 'OPTICAL' be arranged so that the vowels always come together?

- **A.** 920
- **B.** 825
- **C.** 720
- **D.** 610
- **E.** 986

Answer: C

Explanation: The word 'OPTICAL' has 7 letters. It has the vowels 'O','I','A' in it and these 3 vowels should always come together. Hence these three vowels can be grouped and considered as a single letter. That is, PTCL (OIA).





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Hence we can assume total letters as 5 and all these letters are different.

Number of ways to arrange these letters

All the 3 vowels (OIA) are different

Number of ways to arrange these vowels among themselves

$$= 3! = 3 \times 2 \times 1 = 6$$

Hence, required number of ways

$$= 120 \times 6 = 720$$

35. How many words can be formed by using all letters of the word 'BIHAR'?

- **A.** 720
- **B.** 24
- **C.** 120
- **D.** 60
- **E.** 75

Answer: C

Explanation: The word 'BIHAR' has 5 letters and all these 5 letters are different.

Total number of words that can be formed by using all these 5 letters

$$=5_{P_5}=5!$$

$$= 5 \times 4 \times 3 \times 2 \times 1 = 120$$



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