

FOR SBI IBPS PO PRE

2025

28

QUANT CHECKLIST

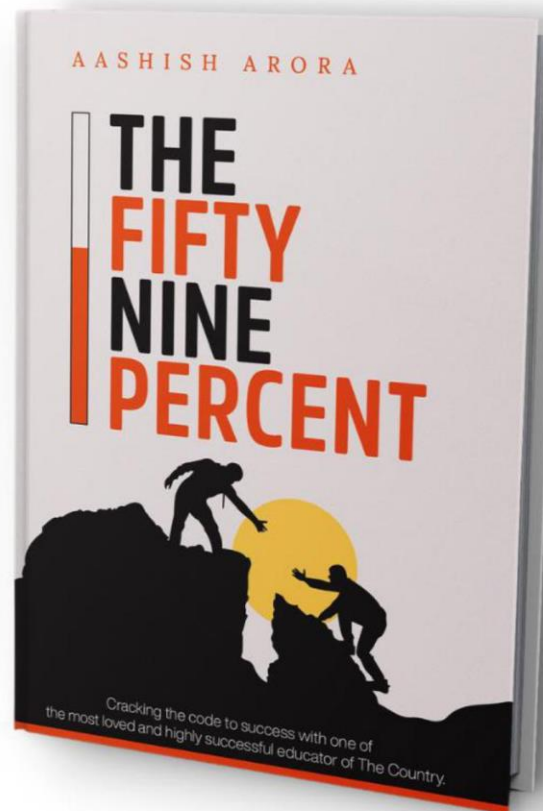
Practice Module by Aashish Arora

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DEAR STUDENTS

We all dream about the day when we will crack XYZ examination, when will get a five-six-digit big salary, travel to all those beautiful places, buy new spacious house for our parents. Our entire focus is on the success, not the struggle. And it's totally understandable — because success is memorable, and everybody wants it, while the struggle is drab, disagreeable, and unattractive for the general public. But, it is the effort, struggling, and sticking to your resolutions that shapes you as a person. Success is a reward for giving your best, but it's not always within your control whether and when you get to enjoy it. Whenever you find yourself discouraged by your lack of success, remind yourself that it is not giving-up and working hard is your real reward. It's in your hands whether you allow yourself to see the rewards the struggle generates or ignore them, Whether you mindlessly see the end result as the sole indicator of success. I failed numerous times in life. I could have despaired that I had lost so much time and effort and money, but I hadn't really failed. I had been true to my values of pursuing the life I wanted. I kept going, despite the obstacles I constantly encountered along the way. Eventually my efforts paid off. But even if it would have taken longer to get my results — the struggle would still have been worth it for the immense changes I underwent on the journey to pursue my dreams. Eventually my efforts paid off, but even if it had taken longer to get the results — the struggle would still have been worth it for the immense changes I underwent on the journey to pursue my dreams.

Rise and Shine.

Aashish Arora

1. SIMPLIFICATION AND APPROXIMATION

Direction: What value should come in place of the question mark (?) in the following question?

(1) $250\% \text{ of } (36 \times \sqrt[3]{1728}) = 5400 \div ?$

- (a) 8
- (b) 7
- (c) 5
- (d) 9
- (e) None of these

(2) $132 \times 48 \div 16 + 48^2 = ? + 18 \times 27$

- (a) 2254
- (b) 2364
- (c) 2244
- (d) 2214
- (e) None of these

(3) $(\sqrt{6084} + \sqrt[3]{4096}) \times 18 - 33^2 = ?$

- (a) 603
- (b) 528
- (c) 515
- (d) 427
- (e) None of these

(4) $48/? \times 2197/104 = 2268 \div 27$

- (a) 53/406
- (b) 42/507
- (c) 72/793
- (d) 48/239
- (e) None of these

(5) $95\% \text{ of } 1920 + \sqrt{1444} = ? \times 14$

- (a) 112
- (b) 127
- (c) 136
- (d) 133
- (e) None of these

(6) $18 \times \sqrt{576} = ? \times 192 \times \sqrt{324}$

- (a) $1/7$
- (b) $1/9$

- (c) $\frac{1}{8}$
- (d) $\frac{1}{6}$
- (e) None of these

(7) $(5808 \div 12) - (27 \times 16) + \sqrt[3]{74088} = ?$

- (a) 41
- (b) 94
- (c) 39
- (d) 77
- (e) None of these

(8) $28.56\% \text{ of } 588 + 23.07\% \text{ of } 624 - 45.45\% \text{ of } 308 = ? \times 4$

- (a) 43
- (b) 57
- (c) 79
- (d) 81
- (e) None of these

(9) $\sqrt{6084} + 26^2 + (18 \times 14) = \frac{6}{9} \text{ of } ?$

- (a) 1728
- (b) 1827
- (c) 1509
- (d) 1256

(e) None of these

(10) $542.36 + 72.8 + 808.6 + 576 - 408.76 = ?$

(a) 1591

(b) 1341

(c) 1451

(d) 1441

(e) None of these

(11) $\sqrt{729} + \sqrt{7056} - (18 \times 8) = ? - (16 \times 14)$

(a) 131

(b) 141

(c) 161

(d) 191

(e) None of these

(12) $? - 18^2 = 48 \times 128 \div 32 + 16^2$

(a) 688

(b) 772

(c) 664

(d) 522

(e) None of these

(13) $\sqrt{(60\% \text{ of } 400 + ?)} = 14^2 - 28 + 84$

- (a) 139
- (b) 145
- (c) 137
- (d) 144
- (e) None of these

(14) $18 \times 14.02 + 23 \times 16.98 - 16 \times 27.06 + 324 = ? \times 5$

- (a) 107
- (b) 129
- (c) 153
- (d) 185
- (e) None of these

(15) $54.54 \times 297 + 41.66 \times 540 - 15.38 \times 364 = ? \times 25$

- (a) 1086
- (b) 1872
- (c) 1324
- (d) 1742
- (e) None of these

(16) $55\% \text{ of } 180 + 2^8 - ? = 756 \div 42$

- (a) 289
- (b) 337
- (c) 452
- (d) 785
- (e) None of these

(17) $\sqrt{1444} \times 12 - 14 \times \sqrt{784} + (4^3 \div 2) = ?$

- (a) 72
- (b) 84
- (c) 88
- (d) 96
- (e) None of these

(18) $\frac{5}{8}$ of 431.99 + $\frac{7}{3}$ of 255.08 - $\frac{5}{18}$ of 809.99 + $\frac{7}{17}$ of 697 = ?

- (a) 927
- (b) 282
- (c) 529
- (d) 758
- (e) None of these

(19) $(8560 + 4098 - 728 - 2815) \div 5 = ? \times 4$

- (a) 982.75
- (b) 782.25

(c) 524.25

(d) 455.75

(e) None of these

(20) $(724 \times 81/54 + 456 \times 36/48 - \sqrt[3]{884736}) \div 18 = ?$

(a) 38

(b) 74

(c) 56

(d) 42

(e) None of these

Answers:

(1) C

(2) D

(3) A

(4) B

(5) D

(6) C

(7) B

(8) A

(9) C

(10) A

(11) D

(12) B

(13) D

(14) A

(15) C

(16) B

(17) D

(18) A

(19) D

(20) B

Solutions:

$$(1) 250\% \text{ of } (36 \times \sqrt[3]{1728}) = 5400 \div ?$$

$$250/100 \times 432 = 5400/?$$

$$1080 = 5400/?$$

$$? = 5$$

$$(2) 132 \times 48 \div 16 + 48^2 = ? + 18 \times 27$$

$$396 + 2304 = ? + 486$$

$$2700 - 486 = 2214$$

$$(3) (\sqrt{6084} + \sqrt[3]{4096}) \times 18 - 33^2 = ?$$

$$(78 + 16) \times 18 - 1089 = ?$$

$$94 \times 18 - 1089 = ?$$

$$1692 - 1089 = 603$$

$$(4) 48/? \times 2197/104 = 2268 \div 27$$

$$1014/? = 84$$

$$? = 42/507$$

$$(5) 95\% \text{ of } 1920 + \sqrt{1444} = ? \times 14$$

$$1824 + 38 = 14x$$

$$1862/14 = 133$$

$$(6) 18 \times \sqrt{576} = ? \times 192 \times \sqrt{324}$$

$$24 = ? \times 192$$

$$? = 24/192 = \frac{1}{8}$$

$$(7) (5808 \div 12) - (27 \times 16) + \sqrt[3]{74088} = ?$$

$$484 - 432 + 42 = ?$$

$$? = 94$$

$$(8) 28.56\% \text{ of } 588 + 23.07\% \text{ of } 624 - 45.45\% \text{ of } 308 = ? \times 4$$

$$2/7 \times 588 + 3/13 \times 624 - 5/11 \times 308 = 4x$$

$$168 + 144 - 140 = 4x$$

$$172/4 = 43$$

$$(9) \sqrt{6084} + 26^2 + (18 \times 14) = 6/9 \text{ of } ?$$

$$78 + 676 + 252 = 6/9 \times ?$$

$$1006 \times 9/6 = 1509$$

$$(10) 542.36 + 72.8 + 808.6 + 576 - 408.76 = ?$$

$$= 1591$$

$$(11) \sqrt{729} + \sqrt{7056} - (18 \times 8) = ? - (16 \times 14)$$

$$27 + 84 - 144 = ? - 224$$

$$? = 191$$

$$(12) ? - 18^2 = 48 \times 128 \div 32 + 16^2$$

$$? - 324 = 192 + 256$$

$$? = 772$$

$$(13) \sqrt{(60\% \text{ of } 400 + ?)} = 14^2 - 28 + 84$$

$$\sqrt{240 + ?} = 196 - 28 + 84$$

$$\sqrt{240 + ?} = 252$$

$$\sqrt{?} = 252 - 240$$

$$\sqrt{?} = 12$$

$$? = 144$$

$$(14) 18 \times 14.02 + 23 \times 16.98 - 16 \times 27.06 + 324 = ? \times 5$$

$$252 + 391 - 432 + 324 = 5x$$

$$535/5 = 107$$

$$(15) 54.54 \times 297 + 41.66 \times 540 - 15.38 \times 364 = ? \times 25$$

$$600/11 \times 197 + 500/12 \times 540 - 200/13 \times 364 = 25x$$

$$16200 + 22500 - 5600 = 25x$$

$$33100/25 = 1324$$

$$(16) 55\% \text{ of } 180 + 2^8 - ? = 756 \div 42$$

$$98 + 256 - ? = 18$$

$$355 - 18 = 337$$

$$(17) \sqrt{1444} \times 12 - 14 \times \sqrt{784} + (4^3 \div 2) = ?$$

$$38 \times 12 - 14 \times 28 + 64/2 = ?$$

$$456 - 392 + 32 = 96$$

$$(18) 5/8 \text{ of } 431.99 + 7/3 \text{ of } 255.08 - 5/18 \text{ of } 809.99 + 7/17 \text{ of } 697 = ?$$

$$270 + 595 - 225 + 287 = ?$$

$$? = 927$$

$$(19) (8560 + 4098 - 728 - 2815) \div 5 = ? \times 4$$

$$9115/5 = 4x$$

$$1823/4 = 455.75$$

$$(20) (724 \times 81/54 + 456 \times 36/48 - \sqrt[3]{884736}) \div 18 = ?$$

$$(1086 + 342 - 96) / 18 = ?$$

$$1332/18 = 74$$



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2. ARITHMETIC QUESTIONS

(1) X, Y and Z can complete a task together in $8\frac{4}{17}$ days. The ratio of the number of days taken by X and Y to complete the task individually is 7: 5 respectively. Z alone can complete the task in 20 days. In how many days can Y complete the task alone?

X, Y और Z एक साथ मिलकर किसी काम को $8\frac{4}{17}$ दिनों में पूरा कर सकते हैं। X और Y द्वारा अकेले-अकेले काम पूरा करने में लिए गए दिनों की संख्या का अनुपात क्रमशः 7: 5 है। Z अकेले उस कार्य को 20 दिनों में पूरा कर सकता है। Y अकेले उस कार्य को कितने दिनों में पूरा कर सकता है?

- (a) 25 days
- (b) 30 days
- (c) 24 days
- (d) 20 days
- (e) None of these

(2) In a department there are a total of 3800 workers. Last day, except for 8% of the males, all the workers were present in the department. Today except 11% of the female workers are present in the department but in both the days the number of workers present in the department were the same. The number of males in the department is ?

एक विभाग में कुल 3800 कर्मचारी हैं। पिछले दिन, 8% पुरुषों को छोड़कर, सभी कर्मचारी विभाग में उपस्थित थे। आज विभाग में 11% को छोड़कर शेष महिला कर्मचारी उपस्थित हैं, लेकिन दोनों दिनों में विभाग में उपस्थित कर्मचारियों की संख्या समान थी। विभाग में पुरुषों की संख्या कितनी है?

- (a) 2600
- (b) 2500
- (c) 2400
- (d) 2200
- (e) None of these

(3) In portraits, Orange and yellow colour are in the ratio of 7:4. In the upper half of the painting, the ratio of Orange and yellow colour is 5:3. Then find the ratio of Orange and yellow colour in the lower half of the painting ?

चित्रों में नारंगी और पीले रंग का अनुपात 7:4 है। पेंटिंग के ऊपरी आधे भाग में नारंगी और पीले रंग का अनुपात 5:3 है। तो पेंटिंग के निचले आधे भाग में नारंगी और पीले रंग का अनुपात ज्ञात कीजिए?

- (a) 57:32
- (b) 57:31
- (c) 56:31
- (d) 56:32
- (e) None of these

(4) 432 boxes were distributed among 108 students. If each boy received 6 boxes and each girl got 9 boxes, then find the number of boys in the class ?

108 विद्यार्थियों में **432** डिब्बे बाँटे गए। यदि प्रत्येक लड़के को **6** डिब्बे मिले तथा प्रत्येक लड़की को **9** डिब्बे मिले, तो कक्षा में लड़कों की संख्या ज्ञात कीजिए?

- (a) 180
- (b) 185

(c)170

(d)175

(e) None of these

(5) Priya and Geeta started work and worked on alternate days. If Priya 1 starts the work first, the whole work is completed in 24.5 days, while if Geeta starts the work first, the whole work is now completed in $24\frac{1}{3}$ days. Find the percentage of efficiency of Geeta with respect to Priya ?

प्रिया और गीता ने काम शुरू किया और बारी-बारी से काम किया। अगर प्रिया 1 पहले काम शुरू करती है, तो पूरा काम 24.5 दिनों में पूरा हो जाता है, जबकि अगर गीता पहले काम शुरू करती है, तो पूरा काम $24\frac{1}{3}$ दिनों में पूरा हो जाता है। अब पूरा काम $24\frac{1}{3}$ दिन में पूरा हो जाता है। प्रिया के सन्दर्भ में गीता की कार्यकुशलता का प्रतिशत ज्ञात कीजिए।

(a)130.33

(b)134.33

(c)133.33

(d)132.33

(e) None of these

(6) While chasing a Burglar, the initial distance between him and the Cop was 800m. The speed of Cop and Burglar are 65 km/hr and 40 km/hr respectively. Find the distance Burglar had run before getting caught ?

एक चोर का पीछा करते समय, उसके और पुलिस के बीच की शुरुआती दूरी 800 मीटर थी। पुलिस और चोर की गति क्रमशः 65 किमी/घंटा और 40 किमी/घंटा है। पकड़े जाने से पहले चोर ने कितनी दूरी तय की?

(a)1260

- (b) 1270
- (c) 1280
- (d) 1290
- (e) None of these

(7) Ramesh travels from Bhopal to Delhi in 4 equal parts. In the first part, he travelled in a Jeep at the speed of 25 km/hr. In the second part he travelled on a bus at the speed of 50 km/hr. Then he took a boat and travelled at the speed of 60 km/hr. And he travelled the remaining distance on aeroplane at the speed of 75 km/hr. Find his average speed ?

रमेश भोपाल से दिल्ली तक 4 बराबर हिस्सों में यात्रा करता है। पहले हिस्से में वह 25 किमी/घंटा की गति से जीप में यात्रा करता है। दूसरे हिस्से में वह 50 किमी/घंटा की गति से बस में यात्रा करता है। फिर उसने नाव ली और 60 किमी/घंटा की गति से यात्रा की। और उसने शेष दूरी 75 किमी/घंटा की गति से हवाई जहाज से तय की। उसकी औसत गति ज्ञात कीजिए?

- (a) 44.44 km/hr
- (b) 45.44 km/hr
- (c) 46.44 km/hr
- (d) 48.44 km/hr
- (e) None of these

(8) How many sectors can be drawn through 17 points on a circle ?

एक वृत्त पर 17 बिंदुओं से होकर कितने त्रिज्यखंड खींचे जा सकते हैं?

- (a) 135
- (b) 136

(c)140

(d)133

(e) None of these

(9) The average score of a cricketer in a certain number of innings is 52. When he scored four in one innings, his average dropped to 44. How many innings have been played including the last one ?

एक क्रिकेटर का एक निश्चित संख्या में पारियों में औसत स्कोर 52 है। जब उसने एक पारी में चार रन बनाए, तो उसका औसत 44 हो गया। अंतिम पारी सहित कितनी पारियां खेली गई हैं?

(a)22

(b)13

(c)18

(d)12

(e) None of these

(10) Neha invested Rs.30000 on simple interest at P% p.a. If interest received by Neha is $\frac{5}{12}$ of the principal after five years, then find 'P'?

नेहा ने 30000 रुपए साधारण ब्याज पर P% प्रति वर्ष की दर से निवेश किए। यदि पांच वर्ष बाद नेहा को प्राप्त ब्याज मूलधन का $\frac{5}{12}$ है, तो 'P' ज्ञात कीजिए।

(a)8.34%

(b)8.33%

(c)7.33%

(d)7.34%

(e) None of these

(11) A card is drawn from a pack of 52 cards. Find the probability of getting a king of spades or a queen of a club ?

52 पत्तों की गड्डी में से एक पत्ता निकाला जाता है। हुकुम का बादशाह या चिड़ी का बेगम निकलने की प्रायिकता ज्ञात कीजिए।

- (a) $4/52$
- (b) $2/50$
- (c) $2/52$
- (d) $4/50$
- (e) None of these

(12) Vikas lent Rs. 8000 into two parts to two men, one at 16% and another at 17%. After 1 year he gains the interest at 16.4% per annum on the total money. Find the money lent on 16%.

विकास ने दो व्यक्तियों को 8000 रुपये दो भागों में उधार दिए, एक 16% पर और दूसरा 17% पर। 1 वर्ष बाद उसे कुल धनराशि पर 16.4% प्रति वर्ष की दर से ब्याज मिलता है। 16% पर उधार दी गई धनराशि ज्ञात कीजिए।

- (a) 4000
- (b) 4600
- (c) 4200
- (d) 4800
- (e) None of these

(13) A shopkeeper makes a loss of 45% on selling a fruit box at Rs 85.25. At what price should he sell the same box full of sweets to make a profit of 60%?

एक दुकानदार को फलों का एक डिब्बा 85.25 रुपये में बेचने पर 45% की हानि होती है। उसे मिठाई से भरा वही डिब्बा किस कीमत पर बेचना चाहिए कि उसे 60% का लाभ हो?

- (a) 240
- (b) 248
- (c) 230
- (d) 222
- (e) None of these

(14) The ratio of the price of two articles, mobile and watch, was 8:7 last year. This year, the price of mobile phones increased by 12.5% and that of watches by Rs 6000. If their prices are now in the ratio of 7:5, then the price of mobile last year was?

दो वस्तुओं, मोबाइल और घड़ी, की कीमत का अनुपात पिछले साल 8:7 था। इस साल, मोबाइल फोन की कीमत में 12.5% और घड़ियों की कीमत में 6000 रुपये की वृद्धि हुई। यदि उनकी कीमतें अब 7:5 के अनुपात में हैं, तो पिछले वर्ष मोबाइल की कीमत थी?

- (a) 84000
- (b) 83000
- (c) 85000
- (d) 88000
- (e) None of these

(15) 9 girls are arranged according to their age and their average age is 42 and average age of 5 youngest girls is 30 while age of 5 oldest girls is 55, then what is the age of fourth oldest girl ?

9 लड़कियों को उनकी आयु के अनुसार व्यवस्थित किया गया है और उनकी औसत आयु 42 है और 5 सबसे छोटे लड़कियों की औसत आयु 30 है जबकि 5 सबसे बड़ी लड़कियों की आयु 55 है, तो चौथी सबसे बड़ी लड़की की आयु क्या है?

- (a) 42
- (b) 45
- (c) 48
- (d) 47
- (e) None of these

(16) The entry token of an exhibition was increased in the ratio of 14:11, due to which the number of viewers decreased in the ratio 9:8. What is the final daily collection if the collection before the hike was Rs30240?

एक प्रदर्शनी के प्रवेश टोकन में 14:11 के अनुपात में वृद्धि की गई, जिसके कारण दर्शकों की संख्या में 9:8 के अनुपात में कमी आई। यदि वृद्धि से पहले संग्रह 30240 रुपये था, तो अंतिम दैनिक संग्रह क्या है?

- (a) 21100
- (b) 21220
- (c) 21120
- (d) 22120
- (e) None of these

(17) A diamond is broken into 3 parts in the ratio of 2:4:6. The cost of diamond was directly proportional to the square of its weight. Due to this, the owner had a loss of 16380. Calculate the initial cost of diamond?

एक हीरे को 2:4:6 के अनुपात में 3 भागों में तोड़ा गया। हीरे की कीमत उसके वजन के वर्ग के समानुपाती थी। इसके कारण, मालिक को 16380 का नुकसान हुआ। हीरे की प्रारंभिक लागत की गणना करें?

- (a) 51440
- (b) 51180
- (c) 51480
- (d) 51400
- (e) None of these

(18) Aman borrowed a sum of 6720 for 3 years. What will be the CI he would have to pay if the rate of interest for first year is 14.28% p.a., second year is 12.5% p.a. and for third year is 20% p.a. respectively ?

अमन ने 3 वर्षों के लिए 6720 रुपये उधार लिए। यदि पहले वर्ष के लिए ब्याज दर क्रमशः 14.28% प्रति वर्ष, दूसरे वर्ष के लिए 12.5% प्रति वर्ष और तीसरे वर्ष के लिए 20% प्रति वर्ष है, तो उसे कितना ब्याज देना होगा?

- (a) 3644
- (b) 3648
- (c) 3645
- (d) 3640
- (e) None of these

(19) A train can cross a pole in 20 seconds and a 280 meters long platform in 24.5 seconds. Find the time taken by the train to cover a platform of length 352 meters if its speed is increased by 20%

एक रेलगाड़ी एक खंभे को 20 सेकंड में तथा 280 मीटर लंबे प्लेटफॉर्म को 24.5 सेकंड में पार कर सकती है। यदि रेलगाड़ी की गति 20% बढ़ा दी जाए तो 352 मीटर लंबे प्लेटफॉर्म को पार करने में उसे कितना समय लगेगा?

- (a) 24 sec
- (b) 25 sec
- (c) 29 sec
- (d) 27 sec
- (e) None of these

(20) In how many ways can the letters of the word 'PUDDLE' be arranged?

शब्द 'PUDDLE' के अक्षरों को कितने तरीकों से व्यवस्थित किया जा सकता है?

- (a) 350
- (b) 360
- (c) 340
- (d) 380
- (e) None of these

Answers:

- (1) c
- (2) d
- (3) b
- (4) a
- (5) c

(6)c

(7)a

(8)b

(9)d

(10)b

(11)c

(12)d

(13)b

(14)a

(15)d

(16)c

(17)c

(18)b

(19)a

(20)b

Solutions:

$$(1) \frac{1}{7}x + \frac{1}{5}x + \frac{1}{20} = \frac{17}{140}$$

$$x = 4.8$$

$$\text{Number of days taken by Y} = 4.8 \times 5 = 24 \text{ days}$$

$$(2) \text{Total workers} = 3800$$

$$\text{Total Male} = M$$

$$\text{Total female} = F$$

$$3800 - 8\% M = 2500 - 11\% F$$

$$8M = 11F$$

$$M/F = 11/8$$

$$\text{Male} = 3800 \times 11/19 = 2200$$

| | | | |
|------------|--------|--------|-----------|
| (3). | Orange | Yellow | |
| Overall | 7 | 4 |) * 8 * 2 |
| Upper half | 5 | 3 |) * 11 |

$$\text{Overall} = 112:64$$

$$\text{Upper half} = 55:33$$

$$\begin{aligned} \text{Lower half} &= (112-55):(64-33) \\ &= 57:31 \end{aligned}$$

$$(4) \text{ Average box received} = 432/108 = 4$$

$$4 \times 108 = 6 \times B + 9(108 - B)$$

$$432 = 6B + 972 - 9B$$

$$3B = 972 - 432$$

$$B = 180$$

(5) Work completed in 24 days is equal

And after that there are two condition

$$P + 1/2G = G + 1/3P$$

$$P/G = 3/4$$

$$\text{Geeta efficiency} = 4 \times 100/3 = 133.33$$

| | | |
|----------|---------|-----|
| (6). | Burglar | Cop |
| Speed | 40 | 65 |
| Speed | 8 | 13 |
| Distance | 8 | 13 |

$$13 \text{ unit} = 8 \text{ unit} = 800$$

$$1 \text{ unit} = 160$$

$$\text{Burglar travelled} = 8 * 160 = 1280$$

$$(7) \text{ Total distance} = (\text{LCM of } 25, 50, 60, 75) = 300$$

$$\text{Time} = 300/25 = 12$$

$$\text{Time} = 300/50 = 6$$

$$\text{Time} = 300/60 = 5$$

$$\text{Time} = 300/75 = 4$$

$$\begin{aligned} \text{Average speed} &= 300 * 4 / 27 \\ &= 44.44 \text{ km/hr} \end{aligned}$$

$$\begin{aligned} (8) \text{ Sectors mean any two point of circle} &= 17 C^2 \\ &= 17 * 16 / 2 \\ &= 136 \end{aligned}$$

$$(9) 52 - 48 = 48 - 4$$

$$4 \text{ unit} = 44$$

$$1 \text{ unit} = 11$$

$$\text{Total remaining} = 11 + 1 = 12$$

$$(10) \text{ Interest received by Neha} = 5/12 * 40000 = 12500$$

ATQ,

$$12500 = 30000 * P * 5 / 100$$

$$P = 12500 / 300 * 5$$

$$= 8.33\%$$

(11) King of spade = 1

Queen of club = 1

Probability = $1 + 1/52$

= $2/52$

(12) 16 17

16.4

0.6 0.4

= 3:2

Money lent on 16% = $\frac{3}{5} * 8000$

= 4800

(13) Box price = 100x

55% price = 85.25

$100x = 85.25 * 100 / 55$

$100x = 155$

60% profit = $155 * 160 / 100$

= 248

(14) Mobile Watch

Old 8x 7x

New 9x 7x + 6000

$9x / 7x + 6000 = 7/5$

$45x = 49x + 42000$

$4x = 42000$

$x = 10500$

Mobile price = 8x

$$=8*10500$$

$$=84000$$

(15) Let the age of fifth oldest girl =G

$$9*42=(5*30)+(5*55)-G$$

$$378=150+275-G$$

$$G=425-378$$

$$G=47$$

(16) Initial=14*9=126x

$$\text{Final} = 11*8 = 88x$$

$$126x = 30240$$

$$x=240$$

$$\text{Final collection} = 88*240$$

$$=21120$$

(17) Broken part = 2:4:5

$$\text{Total weight} = 11$$

Cost of Initial weight

$$= 11 \times 6 = 66 \text{ units}$$

$$\text{Cost of Broken diamond} = 2 \times 2 + 4 \times 4 + 5 \times 5$$

$$= 45 \text{ units}$$

$$66 \text{ units} - 45 \text{ units} = 16380$$

$$21 \text{ units} = 16380$$

$$1 \text{ unit} = 780$$

$$\text{Initial cost} = 780 \times 66$$

$$=51480$$

$$(18) 14.28\% = \frac{1}{7}, 12.5\% = \frac{1}{8}, 20\% = \frac{1}{5}$$

$$7 \quad 8$$

$$8 \quad 9$$

$$5 \quad 6$$

$$280 \quad 432$$

$$280 \text{ unit} = 6720$$

$$1 \text{ unit} = 24$$

$$CI = 24 \times (432 - 280)$$

$$= 24 \times 152$$

$$= 3648$$

$$(19) \text{ Speed of train} = 280 / 4.5 = 40 \text{ m/s}$$

$$\text{Length of train} = 40 \times 20 = 800 \text{ m}$$

$$\text{New speed} = 6/5 \times 40 = 48 \text{ m/s}$$

$$\text{Required time} = 800 + 352 / 48$$

$$= 24 \text{ sec}$$

$$(20) \text{ total letter} = 6$$

But D repeated twice,

$$\text{No. Of arrangement} = 6! / 2!$$

$$= 6 \times 5 \times 4 \times 3 \times 2 \times 1 / 2 \times 1$$

$$= 360$$

3. Quadratic Equations

In each of the following questions, there are two equations. You have to solve both equations and mark the correct answer.

- (a) $x > y$
- (b) $x < y$
- (c) $x = y$ or the relationship cannot be established
- (d) $x \geq y$
- (e) $x \leq y$

1.) I. $3x^2 - 19x + 28 = 0$

II. $7y^2 - 5y - 2 = 0$

2.) I. $x^2 + 16x - 192 = 0$

II. $y^2 - 27y + 152 = 0$

3.) I. $6x^2 - 34x + 48 = 0$

II. $4y^2 - 30y + 54 = 0$

4.) I. $x^2 - 21x + 104 = 0$

II. $3y^2 - 36y + 105 = 0$

5.) I. $2x^2 - 24x + 64 = 0$

II. $4y^2 + 8y - 96 = 0$

6.) I. $x^2 + 27x - 238 = 0$

II. $y^2 - 32y + 252 = 0$

7.) I. $7x^2 + 6x - 16 = 0$

II. $5y^2 - 24y + 27 = 0$

8.) I. $x^2 + 18x - 30 = 9x - 8$

II. $y^2 - 15y + 30 = -4y + 6$

9.) I. $x^2 - 18x + 65 = 0$

II. $2y^2 - 12y + 16 = 0$

10.) I. $5x^2 - 40x + 80 = 0$

II. $8y^2 - 58y + 104 = 0$

11.) I. $x^2 - 22x + 105 = 0$

II. $y^2 - 33y + 270 = 0$

12.) I. $3x^2 - 27x + 54 = 0$

II. $9y^2 + 12y - 96 = 0$

13.) I. $x^2 + 23x - 174 = 0$

II. $y^2 - 17y + 72 = 0$

14.) I. $x^2 + 15x - 42 = 5x - 3$

II. $y^2 - 15y + 39 = 4 - 3y$

15.) I. $x^2 - 32x + 256 = 0$

II. $y^2 - 28y + 196 = 0$

16.) I. $4x^2 = 4096$

II. $y = \sqrt[3]{32768}$

17.) I. $4x^2 - 39x + 92 = 0$

II. $8y^2 - 63y + 124 = 0$

18.) I. $x^2 - 29x + 210 = 0$

II. $y^2 - 25y + 156 = 0$

19.) I. $3x^2 + 10x - 32 = 0$

II. $7y^2 - 49y + 84 = 0$

20.) I. $x^2 - 19x + 84 = 0$

II. $y^2 - 28y + 192 = 0$

Answers:

1. A

2. E

3. E

4. A

5. D

6. B

7. B

8. B

9. A

10. D

11. E

12. A

13. B

14. B

15. A

16. E

17. D

18. A

19. B

20. E

Answers:

$$(1) x = 7/3, 4$$

$$y = -2/7, 1$$

$$(2) x = -24, 8$$

$$y = 19, 8$$

$$(3) x = 3,16/6$$

$$y = 18/4,3$$

$$(4) x = 13,8$$

$$y = 5,7$$

$$(5) x = 8,4$$

$$y = -6,4$$

$$(6) x = -34,7$$

$$y = 18,14$$

$$(7) x = 8/7,-2$$

$$y = 3,9/5$$

$$(8) x = 2,-11$$

$$y = 3,8$$

$$(9) x = 13,5$$

$$y = 2,4$$

$$(10) x = 4,4$$

$$y = 4,26/8$$

$$(11) x = 15,7$$

$$y = 15, 18$$

$$(12) x = 6, 3$$

$$y = -4, 24/9$$

$$(13) x = -29, 6$$

$$y = 9, 8$$

$$(14) x = -13, 3$$

$$y = 5, 7$$

$$(15) x = 16, 16$$

$$y = 14, 14$$

$$(16) x = 32, -32$$

$$y = 32, 32, 32$$

$$(17) x = 23/4, 4$$

$$y = 4, 31/8$$

$$(18) x = 14, 15$$

$$y = 12, 13$$

$$(19) x = -16/3, 2$$

$$y = 4, 3$$

$$(20) x = 12, 7$$

$$y = 16, 12$$

4. WRONG NUMBER SERIES

(1) 40, 50, 65, 90, 126, 175

(a) 50

(b) 65

(c) 90

(d) 175

(e) None of these

(2) 4, 12, 52, 144, 576, 1728

(a) 144

(b) 52

(c) 576

(d) 1728

(e) None of these

(3) 190, 183, 169, 148, 125, 85

(a) 190

(b) 85

(c) 148

(d) 125

(e) None of these

(4) 177, 85, 262, 347, 609, 960

- (a) 609
- (b) 85
- (c) 177
- (d) 960
- (e) None of these

(5) 112, 115, 125, 139, 157, 179

- (a) 157
- (b) 112
- (c) 179
- (d) 115
- (e) None of these

(6) 2048, 1030, 256, 128, 32, 16

- (a) 128
- (b) 1030
- (c) 16
- (d) 2048
- (e) None of these

(7) 39, 40.5, 44, 49.5, 60, 66.5

- (a) 60
- (b) 39
- (c) 44
- (d) 66.5
- (e) None of these

(8) 1290, 1147, 1025, 925, 844, 780

(a) 925

(b) 780

(c) 1147

(d) 1290

(e) None of these

(9) 1360, 1342, 1315, 1280, 1234, 1180

(a) 1234

(b) 1180

(c) 1280

(d) 1360

(e) None of these

(10) 60, 67, 78, 91, 108, 130

(a) 78

(b) 60

(c) 108

(d) 91

(e) None of these

(11) 1860, 1857, 1848, 1807, 1744, 1645

(a) 1807

(b) 1645

(c) 1744

(d) 1848

(e) None of these

(12) 7, 22.5, 78.75, 196.875, 295.3125

(a) 22.5

(b) 196.875

(c) 22.5

(d) 78.75

(e) None of these

(13) 215, 208, 231, 182, 263, 142

(a) 231

(b) 208

(c) 142

(d) 182

(e) None of these

(14) 200, 216, 241, 278, 326, 390

(a) 278

(b) 390

(c) 326

(d) 200

(e) None of these

(15) 292, 326, 359, 394, 430, 467

(a) 326

- (b) 467
- (c) 359
- (d) 292
- (e) None of these

(16) 13, 524, 865, 1080, 1199, 1258

- (a) 1199
- (b) 1080
- (c) 1258
- (d) 13
- (e) None of these

(17) 1820, 1768, 1706, 1634, 1554, 1460

- (a) 1460
- (b) 1634
- (c) 1820
- (d) 1554
- (e) None of these

(18) 1024, 128, 384, 48, 144, 19

- (a) 144
- (b) 1024
- (c) 348
- (d) 128
- (e) None of these

(19) 110, 160, 219, 284, 358, 440

(a) 219

(b) 110

(c) 358

(d) 440

(e) None of these

(20) 575, 614, 576, 615, 577, 612

(a) 612

(b) 615

(c) 614

(d) 575

(e) None of these

Answers

(1) a

(2) b

(3) d

(4) d

(5) b

(6) b

(7) a

(8) c

(9) c

(10) e

(11) d

(12) e

(13) b

(14) a

(15) a

(16) b

(17) d

(18) e

(19) a

(20) b

Solutions

(1) $+3^2, +4^2, +5^2, +6^2, +7^2$

(2) $*3, *4, *3, *4, *3$

(3) -7, -14, -21, -28, -35

(4) Sum of the previous two numbers

(5) +6, +10, +14, +18, +22

(6) $\div 2, \div 4, \div 2, \div 4, \div 2$

(7) +1.5, +3.5, +5.5, +7.5, +9.5

(8) $-12^2, -11^2, -10^2, -9^2, -8^2$

(9) $-9*2, -9*3, -9*4, -9*5, -9*6$

(10) +7, +11, +13, +17, +19

(11) $-2^2+1, -4^2+1, -6^2+1, -8^2+1, -10^2+1$

(12) $*4.5, *3.5, *2.5, *1.5$

(13) $-3^2, +5^2, -7^2, +9^2, -11^2$

(14) $+4*4, +5*5, +6*6, +7*7, +8*8$

(15) +33, +34, +35, +36, +37

(16) $+8^3-1$, $+7^3-2$, $+6^3-3$, $+5^3-4$, $+4^3-5$

(17) -52, -62, -72, -82, -92

(18) $\div 8$, $\times 3$, $\div 8$, $\times 3$, $\div 8$

(19) +50, +58, +66, +74, +82

+8, +8, +8, +8

(20) +39, -38, +37, -36, +35

CHECKLIST

BY

AASHISH

ARORA

5. MISSING NUMBER SERIES

(1) 19, ? 42, 65, 105, 178

(a) 28

(b) 38

(c) 30

(d) 25

(e) None of these

(2) 23, 23, ?, 53, 113, 233

(a) 43

(b) 29

(c) 33

(d) 49

(e) 20

(3) 1299, 1289, 1271, ?, 1219, 1189

(a) 1200

(b) 1521

(c) 1140

(d) 1247

(e) 1111

(4) 11.5, 25, 36.5, 46, ?, 59

(a) 53.5

- (b) 50
- (c) 51.5
- (d) 55
- (e) 56.3

(5) 89, 100, 122, 155, 199, ?

- (a) 255
- (b) 200
- (c) 254
- (d) 250
- (e) 225

(6) 2084, 2103, 2083, 2101, ?, 2100

- (a) 2034
- (b) 2044
- (c) 2055
- (d) 2045
- (e) 2084

(7) 18, 24, 42, 78, ?, 228

- (a) 138
- (b) 130
- (c) 133
- (d) 153
- (e) None of these

(8) 13, 17, 38, ?, 476, 2384

- (a) 110
- (b) 118
- (c) 115
- (d) 111
- (e) 100

(9) 10000, 2000, ?, 100, 25, 5

- (a) 525
- (b) 600
- (c) 625
- (d) 500
- (e) 645

(10) 2, 3, ?, 155, 498, 1227

- (a) 30
- (b) 39
- (c) 45
- (d) 35
- (e) 32

(11) 816, ?, 782, 733, 652, 531

- (a) 707
- (b) 708
- (c) 807
- (d) 700
- (e) 855

(12) ?, 246, 242, 251, 235, 260

- (a) 240
- (b) 220
- (c) 254
- (d) 245
- (e) None of these

(13) 915, ?, 879, 843, 795, 735

- (a) 905
- (b) 900
- (c) 913
- (d) 911
- (e) 903

(14) 216, 223, 212, ?, 208, 227

- (a) 225
- (b) 220
- (c) 200
- (d) 211
- (e) 252

(15) 4145, 4154, ?, 4191, 4215, 4230

- (a) 4000
- (b) 4170
- (c) 4110
- (d) 4010
- (e) 4770

(16) 18750, 3750, ?, 150, 30, 6

- (a) 750
- (b) 755
- (c) 725
- (d) 722
- (e) None of these

(17) 20, ?, 120, 240, 720, 1440

- (a) 42
- (b) 45
- (c) 41
- (d) 49
- (e) 40

(18) 16, 31, 91, ?, 1801, 10801

- (a) 360
- (b) 361
- (c) 355
- (d) 365
- (e) 369

(19) 222, 25, ?, 272, 519, 791

- (a) 245
- (b) 240
- (c) 247
- (d) 274

(e) 270

(20) 2, 3, ?, 6.75, 10.125

(a) 5.2

(2) 4.3

(c) 4

(d) 4.5

(e) 4.2

Answers

(1) a

(2) b

(3) d

(4) a

(5) c

(6) e

(7) a

(8) b

(9) d

(10) a

(11) c

(12) d

(13) e

(14) a

(15) b

(16) a

(17) e

(18) b

(19) c

(20) d

Solutions:-

(1) $+2^2+5, +2^3+6, +2^4+7, +2^5+8, +2^6+9$

(2) $+1^3-1, +2^3-2, +3^3-3, +4^3-4, +5^3-5$

(3) $-1*10, -2*9, -3*8, -4*7, -5*6$

(4) $+13.5, +11.5, +9.5, +7.5, +5.5$

(5) $+11, +22, +33, +44, +55$

(6) $+19, -20, +18, -17, +16$

(7) $+1*6, +2*9, +3*12, +4*15, +5*18$

(8) $*1+2^2, *2+2^2, *3+2^2, *4+2^2, *5+2^2$

(9) $\div 5, \div 4, \div 5, \div 4, \div 5$

(10) $+1^3, +3^3, +5^3, +7^3, +9^3$

(11) $-3^2, -5^2, -7^2, -9^2, -11^2$

(12) $+1^2, -2^2, +3^2, -4^2, +5^2$

(13) $-12, -24, -36, -48, -60$

(14) $+7, -11, +13, -17, +19$

(15) $+9*1, +8*2, +7*3, +6*4, +5*3$

(16) $\div 5, \div 5, \div 5, \div 5, \div 5$

(17) $*2, *3, *2, *3, *2$

(18) $*2-1, *3-2, *4-3, *5-4, *6-5$

(19) Sum of the previous two numbers

(20) $*1.5, *1.5, *1.5, *1.5, *1.5$

6. DATA INTERPRETATION

SET 1. The table shows the data about number of Premium tickets sold & Standard tickets sold by five different sales agents. Read the data and answer the following questions.

नीचे दी गई तालिका में पाँच अलग-अलग बिक्री एजेंटों द्वारा बेचे गए प्रीमियम टिकटों और स्टैंडर्ड टिकटों की संख्या के बारे में डेटा दिया गया है। डेटा को पढ़ें और निम्नलिखित प्रश्नों के उत्तर दें:

| Agent | Premium : Standard | Economy tickets sold as a percentage of total no of tickets sold | No of Standard tickets sold |
|-------|-----------------------|---|-----------------------------------|
| A | 07:03 | 25% | 180 |
| B | 03:01 | 15% | 153 |
| C | 05:03 | 20% | 192 |
| D | 05:04 | 10% | 360 |
| E | 07:04 | 12.50% | 280 |

- If the total number of tickets sold by agent F is 230 more than the total number of tickets sold by agent D, and agent F sold '3a' more Premium tickets and 'a' more Standard tickets than agent D, then find the value of 'a' if agent F sold 440 Standard tickets (agent F sold only two types of ticket : Premium & Standard tickets).
यदि एजेंट F द्वारा बेचे गए कुल टिकटों की संख्या एजेंट D द्वारा बेचे गए कुल टिकटों की तुलना में 230 अधिक है, और एजेंट F ने '3a' अधिक प्रीमियम टिकट और 'a' अधिक स्टैंडर्ड टिकट एजेंट D की तुलना में बेचे हैं, तो 'a' का मान ज्ञात करें यदि एजेंट F ने 440 स्टैंडर्ड टिकट बेचे (एजेंट F ने केवल दो प्रकार के टिकट बेचे: प्रीमियम और स्टैंडर्ड)।
(A)80
(B)75
(C)50
(D)55
(E)None of these

2. If 42.84% & 33.33% of the number of Premium tickets & Standard tickets sold by agent A are balcony tickets and rest are non-balcony tickets, then find the ratio between the number of Premium tickets(non-balcony) sold and the number of Standard tickets(non-balcony) sold.

यदि एजेंट A द्वारा बेचे गए प्रीमियम टिकटों और स्टैंडर्ड टिकटों का क्रमशः 42.84% और 33.33% बालकनी टिकट हैं और शेष नॉन-बालकनी टिकट हैं, तो नॉन-बालकनी प्रीमियम टिकटों और नॉन-बालकनी स्टैंडर्ड टिकटों की संख्या का अनुपात ज्ञात करें।

- (A) 4:9
(B) 3:8
(C) 4:5
(D) 2:1
(E) None of these

3. Find the average number of Economy tickets sold by agent B, C, D and E.

एजेंट B, C, D और E द्वारा बेचे गए इकोनॉमी टिकटों की औसत संख्या ज्ञात करें।

- (A) 150
(B) 118
(C) 109
(D) 140
(E) None of these

4. If number of Premium tickets sold by another agent X is equal to 60% of average number of Premium tickets sold by agent C & D and number of Standard tickets sold by agent X is equal to average number of Standard tickets sold by agent B, C & D, then the sum of number of (Premium+Standard) tickets sold by agent X is how much more or less than number of Standard tickets sold by agent E?

यदि किसी अन्य एजेंट X द्वारा बेचे गए प्रीमियम टिकटों की संख्या एजेंट C और D द्वारा बेचे गए प्रीमियम टिकटों की औसत संख्या के 60% के बराबर है और एजेंट X द्वारा बेचे गए स्टैंडर्ड टिकटों की संख्या एजेंट B, C और D द्वारा बेचे गए स्टैंडर्ड टिकटों की औसत संख्या के बराबर है, तो एजेंट X द्वारा बेचे गए (प्रीमियम + स्टैंडर्ड) टिकटों की कुल संख्या एजेंट E द्वारा बेचे गए स्टैंडर्ड टिकटों की संख्या से कितनी अधिक या कम है?

- (A) 172 less
(B) 186 more
(C) 166 less
(D) 188 more
(E) None of these

5. Find the difference between the number of Standard tickets sold by agent D & E and the number of Economy tickets sold by agent B & C?

एजेंट D और E द्वारा बेचे गए स्टैंडर्ड टिकटों की संख्या और एजेंट B और C द्वारा बेचे गए इकोनॉमी टिकटों की संख्या के बीच का अंतर ज्ञात करें।

- (A) 404
- (B) 612
- (C) 792
- (D) 881
- (E) None of these

Solutions

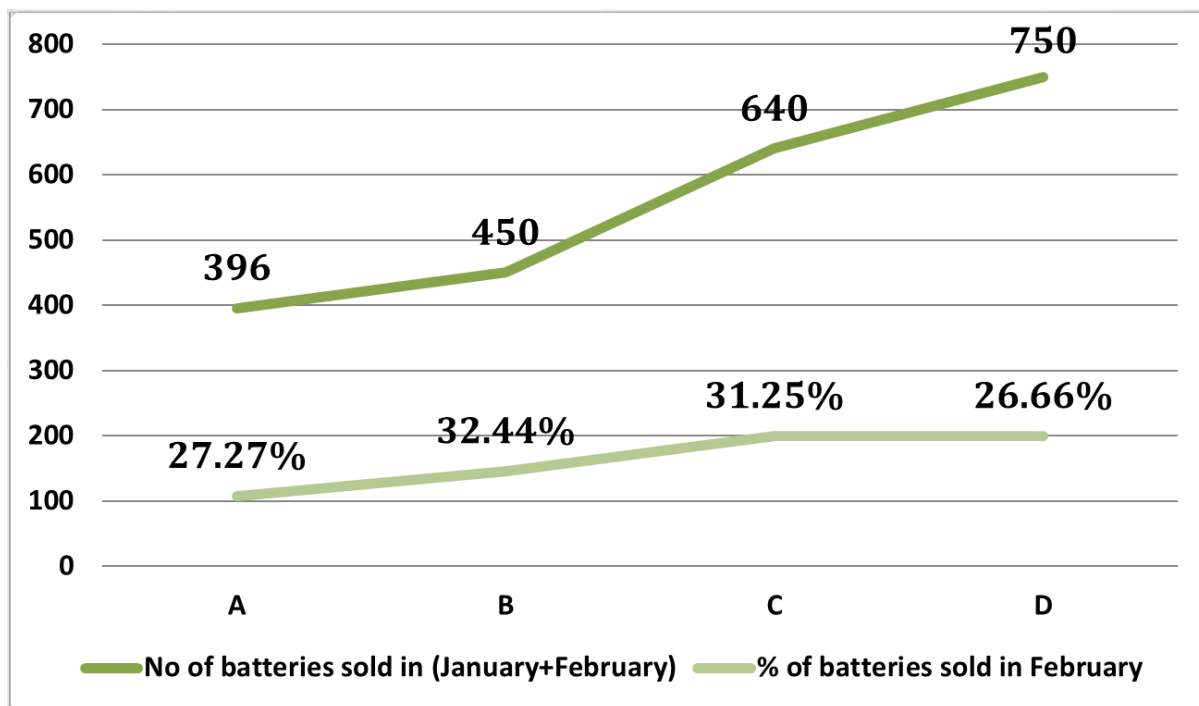
For Agent A : ratio of Economy tickets sold will be $25\% \times [(7+3)/75\%] = 10/3$ so ratio (Premium : Standard : Economy) will be $7 : 3 : 10/3 = 21 : 9 : 10$ so $9u = 180$ so $1u = 20$ so number of Premium tickets sold = $21 \times 20 = 420$, number of Economy tickets sold = $10 \times 20 = 200$. Similarly we can calculate for each agent.

| Agent | No of Premium tickets sold | No of Standard tickets sold | No of Economy tickets sold | Total |
|-------|----------------------------|-----------------------------|----------------------------|-------|
| A | 420 | 180 | 200 | 800 |
| B | 459 | 153 | 108 | 720 |
| C | 320 | 192 | 128 | 640 |
| D | 450 | 360 | 90 | 900 |
| E | 490 | 280 | 110 | 880 |

1. (A)80 {total number of tickets sold by agent F is 230 more than total number of tickets sold by agent D so total number of tickets sold by agent F = $900 + 230 = 1130$ & number of Standard tickets sold by agent F is 440 so number of Premium tickets sold by agent F is = $1130 - 440 = 690$, so value of a = $440 - 360 = 80$ }
2. (D)2:1 {42.84% & 33.33% of the number of Premium tickets & Standard tickets sold by agent A are balcony tickets and rest are non-balcony tickets, so the ratio between the number of Premium tickets(non-balcony) sold and the number of Standard tickets(non-balcony) sold = $4/7$ of $420 : 2/3$ of $180 = 240 : 120 = 2 : 1$ }
3. (C)109
4. (B)186 more {number of Premium tickets sold by another agent X is equal to 60% of average number of Premium tickets sold by agent C & D so number of Premium tickets sold by agent X = $3/5$ of $385 = 231$ and number of Standard tickets sold by agent X is equal to average number of Standard tickets sold by agent B, C & D so number of Standard tickets sold by agent X = 235. Required answer = $(231 + 235) - 280 = 466 - 280 = 186$ more}
5. (A)404

SET 2. The line graph shows the data about the number of batteries sold in two different months by four shops. Read the data and answer the following questions.

लाइन ग्राफ में चार दुकानों द्वारा दो अलग-अलग महीनों में बेचे गए बैटरियों की संख्या के बारे में डेटा दिया गया है। डेटा को पढ़ें और निम्नलिखित प्रश्नों के उत्तर दें:



- What percentage of all batteries sold in January by all shops combined is the total number of batteries sold in February by all shops combined?
जनवरी महीने में सभी दुकानों द्वारा बेची गई कुल बैटरियों की संख्या का कितने प्रतिशत फरवरी महीने में सभी दुकानों द्वारा बेची गई कुल बैटरियों की संख्या है?
(A) 67.65%
(B) 48.88%
(C) 41.34%
(D) 72.53%
(E) None of these

2. Determine the value of " $m+n$ " if the total number of batteries sold in January by shops B and C is equal to " $5m+4$ " and the average number of batteries sold in February by shops B, C, and D is " $7n$."

" $m+n$ " का मान ज्ञात करें यदि जनवरी महीने में दुकानों B और C द्वारा बेची गई बैटरियों की कुल संख्या " $5m+4$ " के बराबर है और फरवरी महीने में दुकानों B, C और D द्वारा बेची गई बैटरियों की औसत संख्या " $7n$ " के बराबर है।

- (A) 108
(B) 145
(C) 174
(D) 182
(E) None of these

3. Find the ratio of the number of batteries (Luminous) that shop A sold in January to the number of batteries that shop A sold in February if 37.5% of the batteries sold in January and 25% of the batteries sold in February are of the Livefast brand, with the remaining batteries being of the Luminous brand.

यदि जनवरी महीने में दुकान A द्वारा बेची गई बैटरियों का 37.5% और फरवरी महीने में बेची गई बैटरियों का 25% Livefast ब्रांड का है और शेष बैटरियां Luminous ब्रांड की हैं, तो दुकान A द्वारा जनवरी में बेची गई Luminous बैटरियों की संख्या और फरवरी में बेची गई Luminous बैटरियों की संख्या का अनुपात ज्ञात करें।

- (A) 4:9
(B) 5:3
(C) 3:4
(D) 5:7
(E) None of these

4. If the 40% of the number of Batteries sold in January & 62.5% of the number of batteries sold in February by shop D were defected and 25% & 20% of the number of defected Batteries sold in January & February respectively were returned back & amount was fully refunded to the customer, if the price of a battery is Rs. 1500, then find the difference between the amount refunded(defected January battery) and the amount refunded(defected February battery).

यदि दुकान D द्वारा जनवरी में बेची गई बैटरियों का 40% और फरवरी में बेची गई बैटरियों का 62.5% दोषपूर्ण (defected) थे और जनवरी और फरवरी में बेची गई दोषपूर्ण बैटरियों का क्रमशः

25% और 20% वापस कर दिया गया और ग्राहक को पूरी राशि वापस कर दी गई, तो यदि एक बैटरी की कीमत 1500 रुपये है, तो जनवरी में बेची गई दोषपूर्ण बैटरियों पर वापस की गई राशि और फरवरी में बेची गई दोषपूर्ण बैटरियों पर वापस की गई राशि के बीच का अंतर ज्ञात करें।

- (A)Rs. 50000
- (B)Rs. 55000
- (C)Rs. 45000
- (D)Rs. 60000
- (E)None of these

5. Find 500% of 6.66% of the total number of batteries sold by shop D in both months.

दोनों महीनों में दुकान D द्वारा बेची गई बैटरियों की कुल संख्या का 6.66% का 500% ज्ञात करें।

- (A)140
- (B)250
- (C)150
- (D)180
- (E)None of these

CHECKLIST

Solutions

| Shop | No of batteries sold in January | No of batteries sold in February | Total |
|------|---------------------------------|----------------------------------|-------|
| A | 288 | 108 | 396 |
| B | 304 | 146 | 450 |
| C | 440 | 200 | 640 |
| D | 550 | 200 | 750 |
| | 1582 | 654 | 2236 |

1. (C) 41.34%
2. (C) 174 {total number of batteries sold in January by shop B & C is equal to '5m+4' so $5m+4 = 744$ & $m = 148$ and average number of batteries sold in February by shop B, C & D is '7n' so $7n = 182$ & $n = 26$. Required answer = $148+26 = 174$ }
3. (B) 5:3 {37.5% of the number of batteries sold in January by shop A and 25% of the number of batteries sold in February by shop A are of Lifestar brand and rest are of Luminous brand, so number of batteries(Luminous) sold in January by shop A = $\frac{5}{8}$ of 288 = 180. Required answer = $180 : 108 = 5 : 3$ }
4. (C) Rs. 45000 {40% of the number of Batteries sold in January & 62.5% of the number of batteries sold in February by shop D were defected so number of

defected Batteries sold in January = $\frac{2}{5}$ of 550 = 220 & number of defected Batteries sold in February = $\frac{3}{8}$ of 200 = 125 and 25% & 20% of the number of defected Batteries sold in January & February respectively were returned back so number of defected Batteries returned in January = $\frac{1}{4}$ of 220 = 55 & number of defected Batteries returned in February = $\frac{1}{5}$ of 125 = 25 so difference between the amount refunded(defected January battery) and the amount refunded(defected February battery) = $55 \times 1500 - 25 \times 1500 = 82500 - 37500 = \text{Rs. } 45000\}$

5. (B)250

CHECKLIST

BY

AASHISH

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SET 3. Directions : Study the following passage carefully and answer the questions given below.

The information pertains to the number of lab attendants and Peons at five distinct colleges: FCM, DN, CCS, PBU, and SBU. FCM College, CCS College, PBU College, and SBU College have a lab attendant ratio of 10:9:14:15. There are 290 Peon in total at FCM College and CCS College, which is 210 fewer than there are in all five colleges. PBU College has a 2:1 Peon to SBU College ratio. There are 180 lab attendants and Peons in all at DN College, with a 2:1 lab attendant to Peon ratio. There are exactly as many lab attendants and Peons at DN College as there are at FCM College. The total number of (lab attendant and Peon) in all five colleges is 1100. There are 130 more Peon at CCS College than there are at FCM College.

जानकारी पाँच विभिन्न कॉलेजों: FCM, DN, CCS, PBU, और SBU में लैब सहायक और चपरासियों की संख्या से संबंधित है। FCM कॉलेज, CCS कॉलेज, PBU कॉलेज, और SBU कॉलेज में लैब सहायक का अनुपात 10:9:14:15 है। FCM कॉलेज और CCS कॉलेज में कुल 290 चपरासी हैं, जो सभी पाँच कॉलेजों में चपरासियों की कुल संख्या से 210 कम है। PBU कॉलेज में चपरासी और SBU कॉलेज में चपरासी का अनुपात 2:1 है। DN कॉलेज में कुल 180 लैब सहायक और चपरासी हैं, जिसमें लैब सहायक और चपरासी का अनुपात 2:1 है। DN कॉलेज में लैब सहायक और चपरासी की संख्या ठीक उतनी ही है जितनी FCM कॉलेज में है। पाँचों कॉलेजों में लैब सहायक और चपरासी की कुल संख्या 1100 है। CCS कॉलेज में FCM कॉलेज की तुलना में 130 अधिक चपरासी हैं।

- Find the average number of lab attendant in DN college, CCS college, PBU college and SBU college.
DN कॉलेज, CCS कॉलेज, PBU कॉलेज और SBU कॉलेज में लैब सहायक की औसत संख्या ज्ञात करें।
(A) 120
(B) 125
(C) 240
(D) 210
(E) None of these
- Total number of (lab attendant and Peon) in DN college is how much more or less than total number of (lab attendant and Peon) in CCS college?

DN कॉलेज में कुल (लैब सहायक और चपरासी) की संख्या, CCS कॉलेज में कुल (लैब सहायक और चपरासी) की संख्या से कितनी अधिक या कम है?

- (A) 150 less
- (B) 180 more
- (C) 120 less
- (D) 190 more
- (E) None of these

3. The number of Peon in SBU college is what percent of number of lab attendant in DN college?

SBU कॉलेज में चपरासियों की संख्या, DN कॉलेज में लैब सहायक की संख्या का कितना प्रतिशत है?

- (A) 63.63%
- (B) 72.72%
- (C) 28.56%
- (D) 41.66%
- (E) None of these

4. Find the ratio between number of Peon in DN college and number of Peon in PBU college.

DN कॉलेज में चपरासियों की संख्या और PBU कॉलेज में चपरासियों की संख्या का अनुपात ज्ञात करें।

- (A) 7 : 4
- (B) 3 : 5
- (C) 3 : 2
- (D) 3 : 7
- (E) None of these

5. Find 25% of 300% of the total number of (lab attendant and Peon) in DN college, CCS college & PBU college.

DN कॉलेज, CCS कॉलेज और PBU कॉलेज में कुल (लैब सहायक और चपरासी) की संख्या के 300% का 25% ज्ञात करें।

- (A) 480
- (B) 540
- (C) 500
- (D) 800
- (E) None of these

Solutions

| | lab attendant | Peon | Total |
|-------------|---------------|------|-------|
| FCM college | 100 | 80 | 180 |
| DN college | 120 | 60 | 180 |
| CCS college | 90 | 210 | 300 |
| PBU college | 140 | 100 | 240 |
| SBU college | 150 | 50 | 200 |
| | 600 | 500 | 1100 |

1. (B) 125
2. (C) 120 less
3. (D) 41.66%
4. (B) 3 : 5
5. (B) 540

CHECKLIST

BY

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