

FOR SBI IBPS PO PRE

2025

19

QUANT CHECKLIST

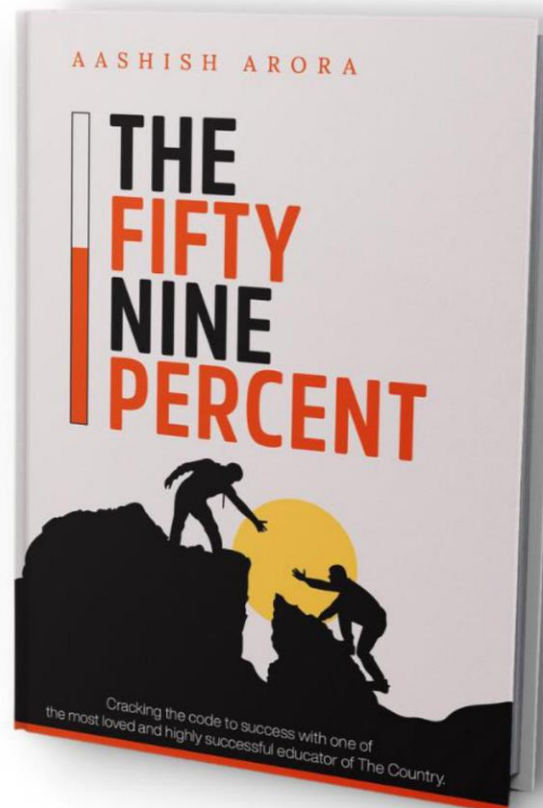
Practice Module by Aashish Arora

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CONTENTS

1. SIMPLIFICATION & APPROXIMATION	9
2. ARITHMETIC WORD PROBLEMS	22
3. QUADRATIC EQUATIONS	43
4. WRONG NUMBER SERIES	59
5. MISSING NUMBER SERIES	70
6. DATA INTERPRETATION	82

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



BY
AASHISH
ARORA

1. SIMPLIFICATION AND APPROXIMATION

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

(1) $\{(75\% \text{ of } 900) \times 40\} \div 72 = ?\% \text{ of } 70 - 45$

- (a) 800
- (b) 200
- (c) 700
- (d) 600
- (e) None of these

(2) $15376 \div 8 + 7208 - 506 \text{ of } 8 + 248 = ? \times 5$

- (a) 1066
- (b) 1268
- (c) 1345
- (d) 1822
- (e) None of these

(3) $52\% \text{ of } 650 + 48\% \text{ of } 1650 - 88\% \text{ of } 800 = ? \div 2$

- (a) 762
- (b) 852
- (c) 952
- (d) 462
- (e) None of these

(4) $(640 \div 80 \times ?) + (40\% \text{ of } 800) = (3672 \div 18 \times 4) + (14 \times 24)$

- (a) 172
- (b) 124
- (c) 105
- (d) 162
- (e) None of these

(5) $9(1/9) + 18(1/18) = ?/16 + 294/36$

- (a) 628
- (b) 720
- (c) 508
- (d) 304
- (e) None of these

(6) $71.42\% \text{ of } 588 + 44.44\% \text{ of } 504 - 18.18\% \text{ of } 528 = ? \times 8$

- (a) 89.5
- (b) 68.5
- (c) 72.5
- (d) 56.5
- (e) None of these

(7) $26^2 + 48^2 + 42 \times 53 = ? \times 38$

- (a) 137
- (b) 186
- (c) 152

(d) 183

(e) None of these

(8) $\{(96 \times 14) + 16.5 \text{ of } 850 - 38^2\} \div 25 = ?$

(a) 602

(b) 557

(c) 583

(d) 459

(e) None of these

(9) $17\% \text{ of } 800 + 17 \times 32 + 5/8 \text{ of } 768 = ?$

(a) 1710

(b) 1050

(c) 1160

(d) 1070

(e) None of these

(10) $6.25\% \text{ of } 1424 + 14 \times 41 - 3/7 \text{ of } 588 = ?^2 + \sqrt{121}$

(a) 20

(b) 25

(c) 27

(d) 22

(e) None of these

(11) $\sqrt{?} \times (56\% \text{ of } 1025 \text{ of } 20 \div 56) = 1640$

(a) 144

- (b) 16
- (c) 81
- (d) 64
- (e) None of these

(12) $300\% \text{ of } 420 - 150\% \text{ of } 320 = ? \times 39 - 52 \times 24$

- (a) 52
- (b) 78
- (c) 64
- (d) 96
- (e) None of these

(13) $(21 \times 16) + (12 \times 18) - (24 \times 52) + (48 \times 24) = ?^2 \times 19 \times 12$

- (a) 7
- (b) 5
- (c) 4
- (d) 6
- (e) None of these

(14) $\sqrt{1024} + \sqrt[3]{13824} - \sqrt[3]{5832} = ? \times \sqrt{361}$

- (a) 6
- (b) 7
- (c) 2
- (d) 5
- (e) None of these

(15) $\{(428 + 536)/4\} - \{(728 - 408)/8\} + \{(504 + 708)/6\} = ?$

- (a) 403
- (b) 507
- (c) 872
- (d) 782
- (e) None of these

(16) $(36 \times 18) + 24^2 + 5.25\% \text{ of } 800 = ? \times 12$

- (a) 102.5
- (b) 128.5
- (c) 107.5
- (d) 106.5
- (e) None of these

(17) $502.5 + 170.2 - 504 - 12.4 + 728 + 102.7 = ?$

- (a) 824
- (b) 987
- (c) 725
- (d) 459
- (e) None of these

(18) $5/7 \text{ of } 672 + 7/9 \text{ of } 504 - 5/16 \text{ of } 832 + 7/17 \text{ of } 918 = ?$

- (a) 990
- (b) 430
- (c) 720
- (d) 820
- (e) None of these

(19) $784 \times 528 \times 72 \times ? / 16 \times 224 \times 231 = 12$

- (a) 2
- (b) 4
- (c) 3
- (d) 8
- (e) None of these

(20) $(27.27\% \times 22 - 31.25\% \times 48 + 42.85\% \times 70) \div 7 = ?$

- (a) 3
- (b) 7
- (c) 8
- (d) 9
- (e) None of these

Answers:

- (1) D
- (2) A
- (3) B
- (4) C
- (5) D
- (6) B
- (7) A
- (8) B
- (9) C
- (10) A
- (11) D

(12) A

(13) E

(14) C

(15) A

(16) E

(17) B

(18) A

(19) C

(20) A

Solutions:

$$(1) \{(75\% \text{ of } 900) \times 40\} \div 72 = ?\% \text{ of } 70 - 45$$

$$675 \times 40/72 = ?\% \times 70 - 45$$

$$375 + 45 = ?\% \times 70$$

$$420 \times 100/70 = 600$$

$$(2) 15376 \div 8 + 7208 - 506 \text{ of } 8 + 248 = ? \times 5$$

$$1922 + 7208 - 4048 + 248 = 5x$$

$$5330/5 = 1066$$

$$(3) 52\% \text{ of } 650 + 48\% \text{ of } 1650 - 88\% \text{ of } 800 = ? \div 2$$

$$338 + 792 - 704 = ? \div 2$$

$$426 \times 2 = 852$$

$$(4) (640 \div 80 \times ?) + (40\% \text{ of } 800) = (3672 \div 18 \times 4) + (14 \times 24)$$

$$(8 \times ?) + 320 = 204 \times 4 + 336$$

$$8x + 320 = 1152$$

$$8x = 832$$

$$x = 104$$

$$(5) 9(1/9) + 18(1/18) = ?/16 + 294/36$$

$$27 + 3/18 = ?/16 + 294/36$$

$$489/18 - 294/36 = ?/16$$

$$684/36 = ?/16$$

$$19 \times 16 = 304$$

$$(6) 71.42\% \text{ of } 588 + 44.44\% \text{ of } 504 - 18.18\% \text{ of } 528 = ? \times 8$$

$$5/7 \times 588 + 4/9 \times 504 - 2/11 \times 528 = 8x$$

$$420 + 224 - 96 = 8x$$

$$548/8 = 68.5$$

$$(7) 26^2 + 48^2 + 42 \times 53 = ? \times 38$$

$$676 + 2304 + 2226 = 38x$$

$$5206/38 = 137$$

$$(8) \{(96 \times 14) + 16.5 \text{ of } 850 - 38^2\} \div 25 = ?$$

$$(1344 + 14025 - 1444)/25 = ?$$

$$13925/25 = 557$$

$$(9) 17\% \text{ of } 800 + 17 \times 32 + 5/8 \text{ of } 768 = ?$$

$$136 + 544 + 480 = ?$$

$$1160$$

$$(10) 6.25\% \text{ of } 1424 + 14 \times 41 - 3/7 \text{ of } 588 = ?^2 + \sqrt{121}$$

$$1/16 \times 1424 + 574 - 252 = ?^2 + 11$$

$$411 - 11 = 400 = 20$$

$$(11) \sqrt{?} \times (56\% \text{ of } 1025 \text{ of } 20 \div 56) = 1640$$

$$\sqrt{?} \times (11480/56) = 1640$$

$$\sqrt{?} = 1640/205$$

$$\sqrt{?} = 8$$

$$? = 64$$

$$(12) 300\% \text{ of } 420 - 150\% \text{ of } 320 = ? \times 39 - 52 \times 24$$

$$1260 - 480 = 39x - 1248$$

$$780 + 1248 = 39x$$

$$2028/39 = 52$$

$$(13) (21 \times 16) + (12 \times 18) - (24 \times 52) + (48 \times 24) = ?^2 \times 19 \times 12$$

$$336 + 216 - 1248 + 1152 = ?^2 \times 19 \times 12$$

$$456/19 \times 12 = ?^2$$

$$?^2 = 2$$

$$? = \sqrt{2}$$

$$(14) \sqrt{1024} + \sqrt[3]{13824} - \sqrt[3]{5832} = ? \times \sqrt{361}$$

$$32 + 24 - 18 = 19x$$

$$38/19 = 2$$

$$(15) \{(428 + 536)/4\} - \{(728 - 408)/8\} + \{(504 + 708)/6\} = ?$$

$$964/4 - 320/8 + 1212/6 = ?$$

$$241 - 40 + 202 = ?$$

$$? = 403$$

$$(16) (36 \times 18) + 24^2 + 5.25\% \text{ of } 800 = ? \times 12$$

$$648 + 576 + 42 = 12x$$

$$1266/12 = 105.5$$

$$(17) 502.5 + 170.2 - 504 - 12.4 + 728 + 102.7 = ?$$

$$= 987$$

$$(18) 5/7 \text{ of } 672 + 7/9 \text{ of } 504 - 5/16 \text{ of } 832 + 7/17 \text{ of } 918 = ?$$

$$480 + 392 - 260 + 378 = ?$$

$$? = 990$$

$$(19) 784 \times 528 \times 72 \times ? / 16 \times 224 \times 231 = 12$$

$$? \times 36 = 12$$

$$? = 1/3$$

$$(20) (27.27 \times 22 - 31.25 \times 48 + 42.85 \times 70) \div 700 = ?$$

$$(3/11 \times 22 - 5/16 \times 48 + 6/14 \times 70) \div 7 = ?$$

$$(6 - 15 + 3) \div 700 = ?$$

$$21/7 = 3$$



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ARORA

2. ARITHMETIC QUESTIONS

(1) Kullu alone can complete a piece of work in 40 days. Kullu started the work and after 10 days, Manu joined her and the rest of the work was completed in 5 days. Find the ratio of the efficiencies of Kullu and Manu.

कुल्लू अकेले एक काम को 40 दिनों में पूरा कर सकता है। कुल्लू ने काम शुरू किया और 10 दिनों के बाद, मनु उसके साथ शामिल हो गया और बाकी काम 5 दिनों में पूरा हो गया। कुल्लू की कार्यक्षमता का अनुपात ज्ञात कीजिए ?

- (a) 1:2
- (b) 2:1
- (c) 3:1
- (d) 1:5
- (e) None of these

(2) A train crosses a standing pole in 30 seconds and a platform of length 240 m in 70 seconds. If the speed of the train remains constant then in how many seconds it will cross a tunnel of length 210m ?

एक ट्रेन एक खड़े खंभे को 30 सेकंड में और 240 मीटर लंबे प्लेटफॉर्म को 70 सेकंड में पार करती है। यदि ट्रेन की गति स्थिर रहे तो वह 210 मीटर लंबी सुरंग को कितने सेकंड में पार करेगी?

- (a) 60 seconds
- (b) 65 seconds
- (c) 55 seconds
- (d) 50 seconds
- (e) None of these

(3) A man covers 33.33% of the journey at 10 km/hr and 50% of the rest at 15 km/hr and remaining journey at 20 km/hr. Find the average speed of the journey.

एक व्यक्ति यात्रा का 33.33% भाग 10 किमी/घंटा की गति से तथा शेष 50% भाग 15 किमी/घंटा की गति से तथा शेष यात्रा 20 किमी/घंटा की गति से तय करता है। यात्रा की औसत गति ज्ञात कीजिए।

- (a) 180/13 km/hr
- (b) 185/13 km/hr
- (c) 175/13 km/hr
- (d) 170/13 km/hr
- (e) None of these

(4) Rita is twice as efficient as Gita and takes 50 days to complete the work. When they work together, they complete x% work in 30 days. Find the value of x.

रीता गीता से दोगुनी कुशल है और काम पूरा करने में 50 दिन लेती है। जब वे साथ मिलकर काम करते हैं, तो वे 30 दिनों में x% काम पूरा कर लेते हैं। x का मान ज्ञात कीजिए।

- (a) 14%
- (b) 42%
- (c) 90%
- (d) 85%
- (e) None of these

(5) The ratio of the weight of P and Q is in the ratio 40 : 60 and the ratio of the weight of P and R is 20: 30. If the sum of the weights of P and R is 19500 kg. Find the sum of the weight of Q and R.

P और Q के भार का अनुपात 40 : 60 है तथा P और R के भार का अनुपात 20 : 30 है। यदि P और R के भार का योग 19500 किग्रा है, तो Q और R के भार का योग ज्ञात कीजिए।

- (a) 23400
- (b) 22400

(c) 20400

(d) 25400

(e) None of these

(6) The population of a town is increased by 25% in the first year, 20% decreased in the second year, 12.5% increased in the third year. If the population of the town after three years is 8100. Find the initial population of the town.

एक कस्बे की जनसंख्या पहले वर्ष में 25% बढ़ी, दूसरे वर्ष 20% घटी, तीसरे वर्ष 12.5% बढ़ी। यदि तीन वर्ष बाद कस्बे की जनसंख्या 8100 है, तो ज्ञात कीजिए

(a) 7555

(b) 7200

(c) 6500

(d) 7100

(e) None of these

(7) The average of the four consecutive even number is 47 and the average of the five consecutive odd numbers is 77. Find the difference between the smallest even number and smallest odd number.

चार क्रमागत सम संख्याओं का औसत 47 है और पाँच क्रमागत विषम संख्याओं का औसत 77 है। सबसे छोटी सम संख्या और सबसे छोटी विषम संख्या के बीच का अंतर ज्ञात कीजिए।

(a) 31

(b) 30

(c) 28

(d) 29

(e) None of these

(8) The marked price of an item is 4000. The shopkeeper allows a discount of 20% and he gets a profit of 30%. What is the actual cost of item?

किसी वस्तु का अंकित मूल्य 4000 है। दुकानदार 20% की छूट देता है और उसे 30% का लाभ होता है। वस्तु की वास्तविक लागत क्या है?

- (a) 2461.53
- (b) 2241.53
- (c) 2041.53
- (d) 2461
- (e) None of these

(9) A vessel of 150 litres is filled with milk and water. 60% of milk and 10% of water is taken out of the vessel. It is found that the vessel is empty by 30%. Find the initial quantity of milk.

150 लीटर का एक बर्तन दूध और पानी से भरा हुआ है। बर्तन से 60% दूध और 10% पानी निकाल लिया जाता है। यह पाया जाता है कि बर्तन 30% खाली है। दूध की आरंभिक मात्रा ज्ञात कीजिए।

- (a) 65
- (b) 68
- (c) 60
- (d) 70
- (e) None of these

(10) The cost price of two items A and B are the same. The shopkeeper decides to mark the price 50% above the cost prices of each item. A discount of 20% is given on item A and a discount of 40% is given on item B. The total profit earned on both the items is 80. Find the total cost prices of both A and B?

दो वस्तुओं A और B का क्रय मूल्य समान है। दुकानदार प्रत्येक वस्तु के क्रय मूल्य से 50% अधिक मूल्य अंकित करने का निर्णय लेता है। वस्तु A पर 20% की छूट दी गई है और वस्तु B पर 40% की छूट दी गई है। दोनों वस्तुओं पर अर्जित कुल लाभ 80 है। A और B दोनों का कुल क्रय मूल्य ज्ञात कीजिए।

- (a) 1500

- (b) 1600
- (c) 1800
- (d) 1400
- (e) None of these

(11) A train, travelling at 54 kmph, crosses a platform in 30 seconds and a man standing on the same platform in 18 seconds. Find the length of the platform?

एक रेलगाड़ी 54 किमी प्रति घंटे की गति से चलते हुए एक प्लेटफार्म को 30 सेकंड में पार करती है और उसी प्लेटफार्म पर खड़े एक व्यक्ति को 18 सेकंड में पार करती है। प्लेटफार्म की लंबाई ज्ञात कीजिए?

- (a) 170
- (b) 185
- (c) 180
- (d) 270
- (e) None of these

(12) A and B started a business with investment of ₹2000 and 3000 respectively. After 4 months, C joined with 4000. After the completion of one year of business, the difference between annual profits of A and C was 3600. Calculate C's share in annual profit.

A और B ने क्रमशः ₹2000 और ₹3000 के निवेश के साथ एक व्यवसाय शुरू किया। 4 महीने बाद, C ₹4000 के साथ शामिल हो गया। व्यवसाय का एक वर्ष पूरा होने पर A और C के वार्षिक लाभ में अंतर 3600 था। वार्षिक लाभ में C का हिस्सा ज्ञात कीजिए।

- (a) 7100
- (b) 7200
- (c) 6500
- (d) 7500
- (e) None of these

(13) P works twice as fast as Q, whereas P and Q together can work three times as fast as R. P, Q and R together can do the same work in 60/80 days.

Find the time taken by Q and R together to complete the work?

P, Q से दोगुनी तेजी से काम करता है, जबकि P और Q मिलकर R से तीन गुना तेजी से काम कर सकते हैं। P, Q और R मिलकर उसी काम को 60/80 दिनों में कर सकते हैं। Q और R द्वारा मिलकर काम पूरा करने में लिया गया समय ज्ञात कीजिए।

- (a) 10
- (b) 20
- (c) 15
- (d) 25
- (e) None of these

(14) A man swimming in a stream finds that in a given time he can swim twice as far with the stream as he can against it. At what rate does he swim if the speed of the stream is 30 kmph.

एक व्यक्ति धारा में तैरते हुए पाता है कि दिए गए समय में वह धारा के साथ दोगुनी दूरी तक तैर सकता है, जितनी वह धारा के विपरीत तैर सकता है। यदि धारा की गति 30 किमी प्रति घंटा है, तो वह किस गति से तैरेगा?

- (a) 90 km/ph
- (b) 85 km/ph
- (c) 80 km/ph
- (d) 95 km/ph
- (e) None of these

(15) The average salary of the entire staff in an office is 3000 per month. The average salary of the Officers is 5000 and that of the Non-officers is 2000. If the number of Officers is 5, then find the number of Non officers in the office.

एक कार्यालय में सभी कर्मचारियों का औसत वेतन 3000 रुपये प्रति माह है। अधिकारियों का औसत वेतन 5000 रुपये और गैर-अधिकारियों का औसत वेतन 2000 रुपये है। यदि अधिकारियों की संख्या 5 है, तो कार्यालय में गैर-अधिकारियों की संख्या ज्ञात कीजिए।

- (a) 5
- (b) 10
- (c) 15
- (d) 20
- (e) None of these

(16) Two jars contain orange and water in the ratio 6:7 and 9:5 respectively. In what ratio these two mixtures should be mixed so that the ratio of orange and water in the resulting mixture becomes 5:4?

दो जार में नारंगी और पानी का अनुपात क्रमशः 6:7 और 9:5 है। इन दोनों मिश्रणों को किस अनुपात में मिलाया जाना चाहिए कि परिणामी मिश्रण में संतरे और पानी का अनुपात 5:4 हो जाए?

- (a) 13:14
- (b) 12:11
- (c) 13:11
- (d) 13:12
- (e) None of these

(17) The average of marks scored by 10th class students in maths is 780. The average of marks of girls in maths is 880 and that of boys is 740. The number of boys in the class is how much % more/less than the number of girls in the class?

10वीं कक्षा के विद्यार्थियों द्वारा गणित में प्राप्त अंकों का औसत 780 है। गणित में लड़कियों के अंकों का औसत 880 है और लड़कों का 740 है। कक्षा में लड़कों की संख्या, लड़कियों से कितने प्रतिशत अधिक/कम है?

- (a) 120%

- (b) 130%
- (c) 150%
- (d) 140%
- (e) None of these

(18) 80 liters of mixture contain milk and water in the ratio 5:3. How much water should be added in the mixture so that the ratio of milk and water becomes 4:5?

80 लीटर मिश्रण में दूध और पानी का अनुपात 5:3 है। मिश्रण में कितना पानी मिलाया जाना चाहिए ताकि दूध और पानी का अनुपात 4:5 हो जाए?

- (a) 135
- (b) 125
- (c) 132
- (d) 130
- (e) None of these

(19) A train having a length 150 m passes a bridge of 130 m length in 14 seconds. In how much time will this train take to pass a platform of length 350 m?

150 मीटर लम्बी एक रेलगाड़ी 130 मीटर लम्बे पुल को 14 सेकंड में पार करती है। इस रेलगाड़ी को 350 मीटर लम्बे प्लेटफार्म को पार करने में कितना समय लगेगा?

- (a) 25 sec
- (b) 20 sec
- (c) 10 sec
- (d) 30 sec
- (e) None of these

(20) The perimeter of an equilateral triangle is equal to the perimeter of the square. If the area of the square is 144 sq. cm, find the area of the equilateral triangle?

एक समबाहु त्रिभुज का परिमाण वर्ग के परिमाण के बराबर होता है। यदि वर्ग का क्षेत्रफल 144 वर्ग सेमी है, तो त्रिभुज का क्षेत्रफल ज्ञात कीजिए?

- (a) $62\sqrt{3}\text{cm}$
- (b) $64\sqrt{3}\text{cm}$
- (c) $63\sqrt{3}\text{cm}$
- (d) $60\sqrt{3}\text{cm}$
- (e) None of above

Answers:

- (1)d
- (2)a
- (3)b
- (4)c
- (5)a
- (6)b
- (7)d
- (8)d
- (9) c
- (10)b
- (11)c
- (12)e
- (13)c
- (14)a
- (15)b
- (16)a
- (17)c
- (18)e
- (19)a

(20)b

Solutions:

(1) let total work is 30 units.

1 day work of Kullu = 1 unit

1 day work done by Manu = 10 unit

Remain 30 unit work done is

 $30/5 \text{ days} = 6$

Ratio - 1:5

(2) let the speed is $X \text{ m/s}$ length of train = $30x$ (as train passed the pole in 15 sec) $30x + 240 / x = 70$ $X = 6$ Record time \rightarrow $210 + 180 / 6 = 390 / 6$ $= 65 \text{ sec}$ (3) let the total distance is 12 units. Time taken to cover - $4/10, 4/15, 4/20$

Avg speed = Total Distance / Total time

 $12 / (4/10 + 4/15 + 4/20) = 180 / 13$

(4) Rita's 1 day work is 2 units.

Gita's 1 day work is 1 unit.

total work = 100 unit.

work done in 30 days = 90 unit

 $x\% = 90/100 \times 100 = 90\%$.

(5) Ratio of P:Q:R = 40:60:60

$$100 \text{ units} = 19500$$

$$1 = 195$$

$$120 \text{ units} = 195 \times 120 = 23400$$

(6) let the population of the town x

According to the question →

$$x \times \frac{5}{4} \times \frac{4}{5} \times \frac{4}{8} = 8100$$

$$x = 7200$$

(7) series of even number → 44, 46, 48, 50

series of odd number → 73, 75, 77, 79, 81

$$\text{Difference} = 73 - 44 = 29$$

(8) MP → 4000

$$\text{SP after 20\% Discount} \rightarrow 4000 \times \frac{80}{100} = 3200$$

$$\text{CP} \rightarrow 3200 \times \frac{100}{130} = 2461.53$$

(9)	Milk	Water
	60%	10%
	30%	
	20%	30%

Ratio of milk to water - 2:3

$$\text{Quantity of milk} \rightarrow 150 \times \frac{2}{5} = 60$$

(10)		A	B
Let	CP	100x	100x
	MP	150x	150x
	SP	120x	90x

$$\text{Profit} = 210x - 200x = 80$$

$$= 10x = 80$$

$$X = 8$$

$$200x = 1600$$

$$(11) \text{ speed of train} = 54 \times 5 / 18 = 15 \text{ m/s}$$

$$\text{Length of train} = 15 \times 18 = 270$$

$$\text{Length of platform} = 15 \times 30 - 270 = 180$$

(12) Profit Ratio

A B C

$$2000 \times 12 : 3000 \times 12 : 4000 \times 8$$

$$= 6 : 9 : 8$$

$$8x - 6x = 3600$$

$$2x = 3600 ; x = 1800$$

$$C's \text{ share} = 8 \times 1800 = 14400$$

$$(13) P = 2Q = 2R$$

$$\text{Thus, } P:Q:R = 2:1:1$$

$$\text{Then total work} = 60 / 8 \times 4 = 30 \text{ units}$$

$$\text{Time taken by Q \& R} = 30 / 2 = 15 \text{ units}$$

(14) Let Speed of swimmer = X

$$\text{UP speed} = x - 30$$

$$\text{Down speed} = x + 30$$

According to the question.

$$2(x - 30) = x + 30$$

$$2x - 60 = x + 30$$

$$x = 90 \text{ km/ph}$$

(15)	Officer	Non officer
	50	20
	30	
	10	: 20
	1	: 2

If officer = 5

Non - officer= 10

(16) By allegation method

6/13 9/14

5/9

9/14 - 5/9

5/9 - 6/13

Required ratio = 13:14

(17) By Allegation

Girls Boys

880 740

78

4 : 10

Required = $\frac{3}{2} \times 100 = 150\%$.

(18) milk = 50

water = 30

Final Ratio = 4:5

$50/(30 + x) = 9/5$

$250 = 120 + 4x$

$4x = 130$

$X = 32.5$ lit.

(19) Speed of the train = $150+140/140= 280/14 = 20 \text{ m/s}$

Time take to pass a platform - $350+150/20= 500/20 = 25 \text{ sec}$

(20) Area of square = 144cm^2

Side of square = 12 cm

$3S = 4A$

$S=4 *12/3$

$S = 16\text{cm}$

Area of equilateral triangle = $\sqrt{3}s^2/4$
 $= 64\sqrt{3}\text{sq. cm}$

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. $7x^2 - 42x + 56 = 0$

II. $8y^2 + 27y - 86 = 0$

2.) I. $x^2 + 20x - 156 = 0$

II. $y^2 - 14y + 48 = 0$

3.) I. $4x^2 - 34x + 72 = 0$

II. $6y^2 - 48y + 96 = 0$

4.) I. $x^2 - 24x + 135 = 0$

II. $y^2 + 25y - 224 = 0$

5.) I. $5x^2 - 40x + 75 = 0$

II. $8y^2 + 10y - 88 = 0$

6.) I. $x^2 + 7x - 144 = 0$

II. $y^2 - 26y + 168 = 0$

7.) I. $3x^2 - 25x + 52 = 0$

II. $7y^2 - 44y + 64 = 0$

8.) I. $x^2 + 10x - 171 = 0$

II. $y^2 - 21y + 108 = 0$

9.) I. $2x^2 - 16x + 32 = 0$

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

10.) I. $x^2 - 20x + 75 = 0$

II. $3y^2 - 21y + 30 = 0$

11.) I. $12x^2 + 23x - 52 = 0$

II. $18y^2 - 72y + 72 = 0$

12.) I. $x^2 + 28x - 204 = 0$

II. $y^2 - 25y + 114 = 0$

13.) I. $4x^2 - 24x + 36 = 0$

II. $3y^2 - 26y + 56 = 0$

14.) I. $x^2 - 15x + 56 = 0$

II. $y^2 - 18y + 81 = 0$

15.) I. $9x^2 - 51x + 72 = 0$

II. $13y^2 + 7y - 96 = 0$

16.) I. $x^2 - 46x + 529 = 0$

II. $y^2 - 30y + 216 = 0$

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

II. $11y^2 - 57y + 72 = 0$

18.) I. $x^2 - 46x + 528 = 0$

II. $y^2 - 56y + 768 = 0$

19.) I. $2x^2 - 12x + 18 = 0$

II. $3y^2 - 17y + 24 = 0$

20.) I. $x^2 + 6x - 112 = 0$

II. $y^2 - 25y + 136 = 0$

Answers:

1. D

2. E

3. D

4. A

5. A

6. B

7. D

8. E

9. C

10. D

11. B

12. E

13. B

14. B

15. A

16. A

17. C

18. E

19. D

20. E

Answers:

(1) $x = 4,2$

$y = -43/8,2$

(2) $x = -26,6$

$y = 8,6$

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

$y = 4,4$

(4) $x = 9,15$

$y = -32,7$

(5) $x = 5,3$

$y = -4,22/8$

(6) $x = -16,9$

$$y = 12,14$$

$$(7) x = 13/3,4$$

$$y = 4,16/7$$

$$(8) x = -19,9$$

$$y = 12,9$$

$$(9) x = 4,4$$

$$y = 4.5,3$$

$$(10) x = 15,5$$

$$y = 2,5$$

$$(11) x = -39/12,16/12$$

$$y = 2,2$$

$$(12) x = -34,6$$

$$y = 19,6$$

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

$$y = 14/3,4$$

$$(14) x = 8,7$$

$$y = 9,9$$

$$(15) x = 3,24/9$$

$$y = -3,32/13$$

$$(16) x = 23,23$$

$$y = 12, 18$$

$$(17) x = 3, 16/6$$

$$y = 3, 24/11$$

$$(18) x = 22, 24$$

$$y = 24, 32$$

$$(19) x = 3, 3$$

$$y = 3, 8/3$$

$$(20) x = -14, 8$$

$$y = 17, 8$$

CHECKLIST BY AASHISH ARORA

4. WRONG NUMBER SERIES

(1) 54, 60, 49, 65, 40, 76

(a) 60

(b) 54

(c) 49

(d) 65

(e) None of these

(2) 339, 342, 353, 370, 397, 434

(a) 342

(b) 353

(c) 339

(d) 434

(e) None of these

(3) 8, 3.5, 3.5, 7, 28, 224

(a) 3.5

(b) 28

(c) 7

(d) 8

(e) None of these

(4) 9, 27, 135, 950, 8505, 93555

(a) 8505

(b)135

(c)950

(d)27

(e) None of these

(5) 930, 888, 806, 684, 522, 322

(a)322

(b)888

(c)806

(d)322

(e) None of these

(6) 78, 112, 162, 234, 326, 438

(a)438

(b)112

(c)162

(d)78

(e) None of these

(7) 25, 39.5, 57, 71.5, 89, 107.5

(a)25

(b)39.5

(c)57

(d) 89

(e) None of these

(8) 6, 29, 151, 913, 6390, 51201

(a)51201

(b)913

(c)6

(d)6390

(e) None of these

(9) 315, 370, 307, 241, 167, 85

(a)370

(b)315

(c)307

(d)85

(e) None of these

(10) 8000, 800, 160, 44, 19.2, 9.6

(a)9.6

(b) 44

(c) 800

(d)9.6

(e) None of these

(11) 58, 64, 120, 182, 302, 484

(a)64

(b)58

(c)120

(d)182

(e) None of these

(12) 15, 26, 47, 90, 169, 330

(a)330

(b)90

(c)47

(d)169

(e) None of these

(13) 19, 25, 39, 73, 110, 144

(a)25

(b)110

(c)144

(d)19

(e) None of these

(14) 49, 53, 69, 105, 169, 270

(a)270

(b)105

(c)169

(d)49

(e) None of these

(15) 37, 61, 95, 142, 201, 277

(a)277

(b)61

(c)142

(d)201

(e) None of these

(16) 215, 211, 197, 179, 155, 125

(a)211

(b)125

(c)197

(d)215

(e) None of these

(17) 39, 69, 106, 147, 190, 237

(a) 237

(b) 69

(c) 39

(d) 106

(e) None of these

(18) 640, 614, 595, 571, 554, 540

(a) 540

(b) 614

(c) 640

(d) 595

(e) None of these

(19) 335, 299, 267, 239, 215, 200

(a) 299

(b) 335

(c) 215

(d) 200

(e) None of these

(20) 2197, 169, 1690, 135, 1300, 100

(a) 135

(b) 2197

(c) 1690

(d) 1300

(e) None of these

Answers:

- (1)a
- (2)b
- (3)d
- (4)c
- (5)a
- (6)b
- (7)c
- (8)d
- (9)a
- (10)b
- (11)a
- (12)b
- (13)b
- (14)a
- (15)c
- (16)a
- (17)c
- (18)d
- (19)d
- (20)a

Solutions:

- (1) $+2^2, -3^2, +4^2, -5^2, +6^2$
- (2) $+3, +10, +18, +27, +37$
- (3) $*0.5, *1, *2, *4, *8$
- (4) $*3, *5, *7, *9, *11$

(5) -42, -82, -122, -162, -202

(6) +32, +52, +72, +92, +112

(7) +14.5, +15.5, +16.5, +17.5, +18.5

(8) $*4+5$, $*5+6$, $*6+7$, $*7+8$, $*8+9$

(9) -50, -58, -66, -74, -82

(10) $*0.1$, $*0.2$, $*0.3$, $*0.4$, $*0.5$

(11) Sum of the previous two digit

(12) $*2-4$, $*2-5$, $*2-6$, $*2-7$, $*2-8$

(13) $+1^3+5$, $+2^3+6$, $+3^3+7$, $+3^3+8$, $+3^3+9$

(14) $+2^2$, $+4^2$, $+6^2$, $+8^2$, $+10^2$

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

(16) -6, -12, -18, -24, -30

(17) +31, +37, +41, +43, +47

(18) -26, -23, -20, -17, -14

(19) $-9*4$, $-8*4$, $-7*4$, $-6*4$, $-5*4$

(20) $\div 13$, $*10$, $\div 13$, $*10$, $\div 13$

CHECKLIST

BY

AASHISH

ARORA

5. MISSING NUMBER SERIES

(1) 245, ?, 219, 195, 161, 115

(a) 233

(b) 235

(c) 112

(d) 225

(e) 256

(2) 5, 11, ?, 98, 221, 435

(a) 36

(b) 33

(c) 13

(d) 23

(e) 35

(3) 115, 179, 245, ?, 383, 455

(a) 303

(b) 313

(c) 333

(d) 305

(e) 636

(4) 54, 24, 78, 102, ?, 282

(a) 180

(b) 188

(c) 108

(d) 288

(e) 388

(5) 2, 4, 13, 61, 361, ?

(a) 2330

(b) 2550

(c) 2521

(d) 2550

(e) 2203

(6) 27, 35, 99, 315, ?, 1827

(a) 827

(b) 886

(c) 287

(d) 887

(e) 856

(7) 2, 12, 63, ?, 1600, 8006

(a) 331

(b) 319

(c) 311

(d) 399

(e) 300

(8) 108, ?, 144, 48, 192, 64

- (a) 31
- (b) 63
- (c) 69
- (d) 36
- (e) 66

(9) 50, 55, ?, 87, 116, 155

- (a) 66
- (b) 60
- (c) 61
- (d) 16
- (e) 67

(10) ?, 361, 336, 372, 323, 387

- (a) 336
- (b) 345
- (c) 303
- (d) 311
- (e) 369

(11) 10, ?, 22.5, 32.5, 45, 60

- (a) 55
- (b) 51
- (c) 16
- (d) 12
- (e) 15

(12) 37, 44, ?, 271, 1626, 1633

(a) 266

(b) 264

(c) 265

(d) 203

(e) 204

(13) 12, 22, 40, ?, 108, 162

(a) 68

(b) 65

(c) 66

(d) 61

(e) 89

(14) 450, ?, 451, 492, 452, 491

(a) 499

(b) 493

(c) 412

(d) 194

(e) 401

(15) ?, 8400, 1680, 280, 40, 5

(a) 33500

(b) 36320

(c) 33203

(d) 66320

(e) 33600

(16) 3, ?, 191.25, 1243.125, 6837.1875

(a) 26.5

(b) 52.5

(c) 29.5

(d) 25.5

(e) 25

(17) 1575, 2575, ?, 2358, 2015, 2231

(a) 1563

(b) 1236

(c) 1846

(d) 1136

(e) 1456

(18) 540, 565, 601, ?, 714, 795

(a) 650

(b) 556

(c) 623

(d) 639

(e) 653

(19) 95, 108.5, 121, 132.5, 143, ?

(a) 152.5

(b) 115.5

(c) 109.5

(d) 155

(e) 501.5

(20) 370, 359, 340, 311, ?, 215

(a) 271

(b) 270

(c) 266

(d) 289

(e) 255

Answers

(1) b

(2) a

(3) b

(4) a

(5) c

(6) a

(7) b

(8) d

(9) e

(10) b

(11) e

(12) b

(13) a

(14) b

(15) e

(16) d

(17) c

(18) a

(19) a

(20) b

Solutions

(1) -10, -16, -24, -34, -46

+6, +8, +10, +12

(2) $+2^3-2$, $+3^3-2$, $+4^3-2$, $+5^3-2$, $+6^3-2$

(3) +64, +66, +68, +70, +72

(4) Sum of the previous two numbers

(5) $*3-2$, $*4-3$, $*5-4$, $*6-5$, $*7-6$

(6) $+2^3$, $+4^3$, $+6^3$, $+8^3$, $+10^3$

(7) $*5+2$, $*5+3$, $*5+4$, $*5+5$, $*5+6$

(8) $\div 3$, $*4$, $\div 3$, $*4$, $\div 3$

(9) +5, +12, +20, +29, +39

+7, +8, +9, +10

(10) $+4^2$, -5^2 , $+6^2$, -7^2 , $+8^2$

(11) $+2.5*2$, $+2.5*3$, $+2.5*4$, $+2.5*5$, $+2.5*6$

(12) +7, $*6$, +7, $*6$, +7

(13) $+2*5$, $+3*6$, $+4*7$, $+5*8$, $+6*9$

(14) +43, -42, +41, -40, +39

(15) $\div 4$, $\div 5$, $\div 6$, $\div 7$, $\div 8$

(16) $*8.5$, $*7.5$, $*6.5$, $*5.5$

(17) $+10^3$, -9^3 , $+8^3$, -7^3 , $+6^3$

(18) $+5^2$, $+6^2$, $+7^2$, $+8^2$, $+9^2$

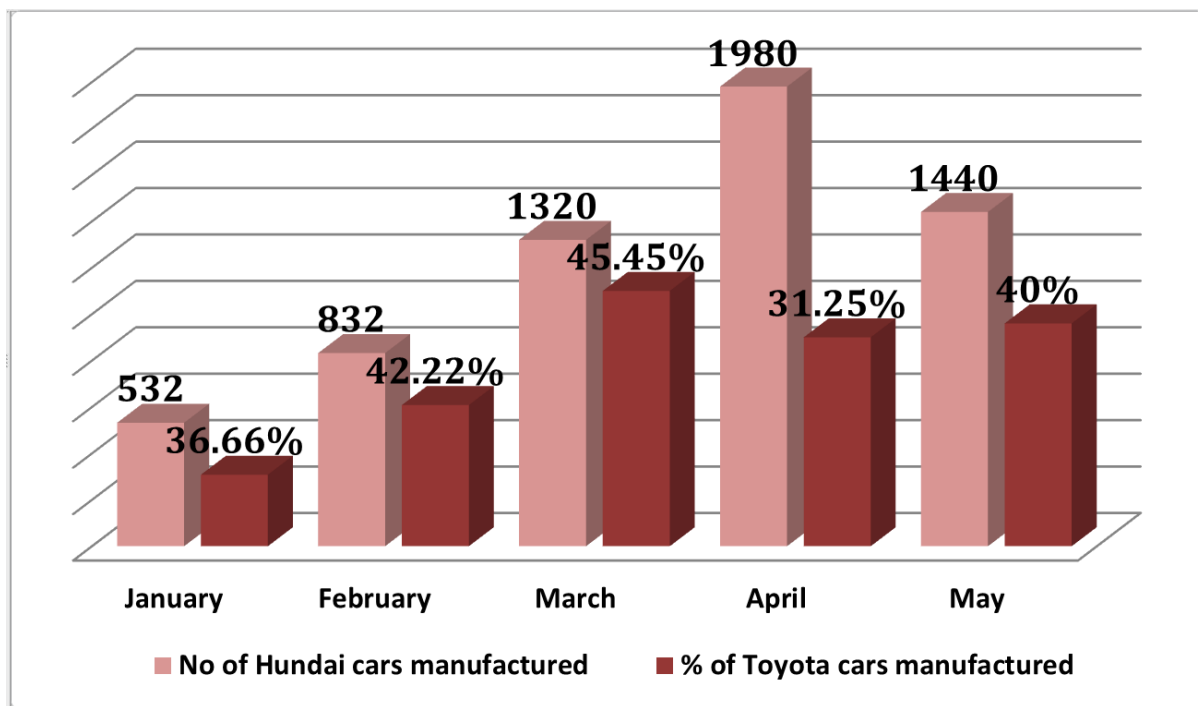
(19) +13.5, +12.5, +11.5, +10.5, +9.5

(20) -4^2+5 , -5^2+6 , -6^2+7 , -7^2+8 , -8^2+9

6. DATA INTERPRETATION

SET 1. The bar graph shows the data about number of cars manufactured by two brands in five different months. Read the data and answer the questions.

बार ग्राफ दो ब्रांड्स द्वारा पांच विभिन्न महीनों में निर्मित कारों की संख्या के डेटा को दिखाता है। डेटा को पढ़ें और निम्नलिखित प्रश्नों का उत्तर दें:



- Determine the smaller root of the equation: $x^2 + 76x + Q = 0$, where Q is the number of Hundai cars manufactured in June, if the number of Hundai cars manufactured in June is 25% more than $(P + 60)$, where P is the number of Toyota cars manufactured in May.

उस समीकरण का छोटा मूल (स्मॉलर रूट) निर्धारित करें: $x^2 + 76x + Q = 0$, जहाँ Q जून में निर्मित हुंडई कारों की संख्या है, यदि जून में हुंडई कारों की संख्या $(P + 60)$ से 25% अधिक है, जहाँ P मई में निर्मित टोयोटा कारों की संख्या है।

- (A) 42
(B) -25

- (C)35
- (D)-51
- (E)None of these

2. If the number of unsold Hundai cars is 25% of the total number of Hundai cars manufactured in January, and the ratio of sold Hundai cars to Toyota cars is 3:2, how much more or less are the unsold Toyota cars than the unsold Hundai cars?

यदि जनवरी में निर्मित हुंडई कारों की कुल संख्या का 25% अविक्रीत (unsold) है और बेची गई हुंडई कारों और टोयोटा कारों का अनुपात 3:2 है, तो अविक्रीत टोयोटा कारें हुंडई की अविक्रीत कारों से कितनी अधिक या कम हैं?

- (A)51 more
- (B)67 less
- (C)85 more
- (D)91 less
- (E)None of these

3. If 44.44% & 40% of the number of Hundai cars & Toyota cars manufactured in April are sold and rest are unsold, then the number of Toyota cars sold is what percent of the number of Toyota cars unsold?

यदि अप्रैल में निर्मित हुंडई कारों और टोयोटा कारों की क्रमशः 44.44% और 40% बेची गई हैं और बाकी अविक्रीत हैं, तो बेची गई टोयोटा कारों की संख्या अविक्रीत टोयोटा कारों की संख्या का कितने प्रतिशत है?

- (A)42.84%
- (B)72.72%
- (C)66.66%
- (D)45.45%
- (E)None of these

4. Determine the ratio between the number of Ford hatchback cars manufactured and the number of Toyota cars manufactured in January if the number of Ford cars manufactured in February is equal to the average number of Hundai cars manufactured in March, April, and May and the ratio of Ford sedan, SUV, and hatchback cars manufactured in February is 5:3:2.

जनवरी में निर्मित टोयोटा कारों की संख्या और फरवरी में निर्मित फोर्ड हैचबैक कारों की संख्या के बीच अनुपात निर्धारित करें, यदि फरवरी में निर्मित फोर्ड कारों की संख्या मार्च, अप्रैल, और मई में निर्मित हुंडई कारों की औसत संख्या के बराबर है और फोर्ड सेडान, एसयूवी और हैचबैक कारों का अनुपात 5:3:2 है।

- (A) 62:81
- (B) 71:73
- (C) 79:77
- (D) 56:57
- (E) None of these

5. Determine the difference between $c\%$ of the number of Hyundai cars manufactured in April and $d\%$ of the number of Toyota cars manufactured in March if the number of Hyundai cars manufactured in January is $c\%$ of the total number of cars manufactured in January and the number of Toyota cars manufactured in April is $d\%$ of the number of Toyota cars manufactured in March.

अप्रैल में निर्मित हुंडई कारों की संख्या के $c\%$ और मार्च में निर्मित टोयोटा कारों की संख्या के $d\%$ के बीच अंतर निर्धारित करें, यदि जनवरी में निर्मित हुंडई कारों की संख्या जनवरी में निर्मित कुल कारों का $c\%$ है और अप्रैल में निर्मित टोयोटा कारों की संख्या मार्च में निर्मित टोयोटा कारों का $d\%$ है।

- (A) 268
- (B) 372
- (C) 354
- (D) 112
- (E) None of these

Solutions

For January : % of Toyota cars manufactured = $36.66\% = 30\% + 6.66\% = \frac{3}{10} + \frac{1}{15} = \frac{11}{30}$ so we can say that $\frac{19}{30} = 532$ so total number of cars(Hundai+ Toyota) cars manufactured = $\frac{30}{19}$ of 532 = 840. So we get,

Month	No of Hundai cars manufactured	No of Toyota cars manufactured	Total
January	532	308	840
February	832	608	1440
March	1320	1100	2420
April	1980	900	2880
May	1440	960	2400
	6104	3876	9980

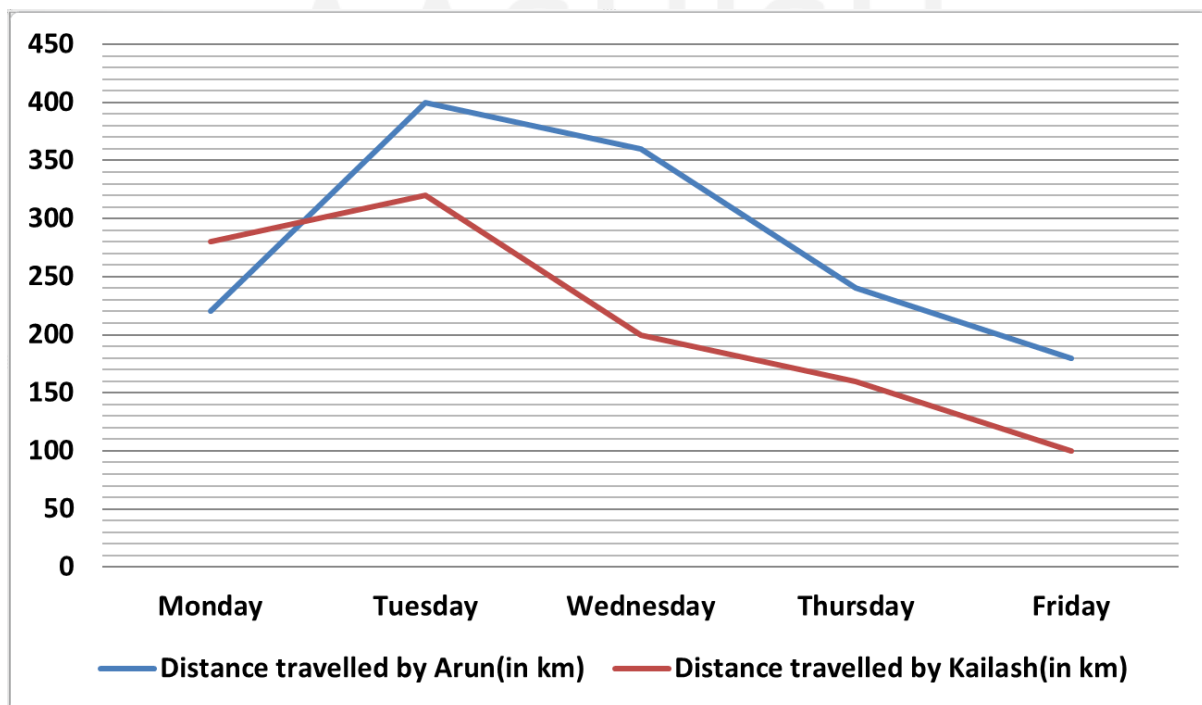
1. (D)-51 {number of Hundai cars manufactured in June is 25% more than (P + 60) so number of Hundai cars manufactured in June = $\frac{5}{4}$ of $(960+60) = 1020$, so $Q = 1020$, and $x^2 + 76x + Q = 0$ & $x^2 + 76x + 1020 = 0$ so we get roots = -25,-51 so the answer will be -51(smaller root of the equation)}
2. (D)91 less {In January, the number of Hundai cars unsold is 25% of the number of Hundai cars manufactured so number of Hundai cars unsold = $\frac{1}{4}$ of 532 = 133 so number of Hundai cars sold = $532 - 133 = 399$ so number of Toyota cars sold = $\frac{2}{3}$ of 399 = 266. Required answer = $133 - 42 = 91$ less}
3. (C)66.66% {44.44% & 40% of the number of Hundai cars & Toyota cars manufactured in April are sold and rest are unsold, so number of Toyota cars sold = $\frac{2}{5}$ of 900 = 360 & the number of Toyota cars unsold = $\frac{3}{5}$ of 900 = 540, so required answer = $\frac{360}{540} * 100 = 66.66\%$ }
4. (C)79:77 {number of Ford cars manufactured in February month is equal to average number of Hundai cars manufactured in March, April and May month so number of Ford cars manufactured in February = 1580 and ratio between Sedan, SUV & Hatchback Ford cars manufactured in February month is 5:3:2, so number of Ford Hatchback cars manufactured = $\frac{2}{10}$ of 1580 = 316 & number of Toyota cars manufactured in January = 308, Required answer = $316:308 = 79:77$ }

5. (C) 354 {number of Hyundai cars manufactured in January is c% of the total number of cars manufactured in January so $c\% = \frac{532}{840} \times 100 = 63.33\%$ and number of Toyota cars manufactured in April is d% of the number of Toyota cars manufactured in March so $d\% = \frac{900}{1100} \times 100 = 81.81\%$ so difference between c% of number of Hyundai cars manufactured in April and d% of the number of Toyota cars manufactured in March. = $\frac{19}{30}$ of 1980 – $\frac{9}{11}$ of 1100 = 1254 – 900 = 354}

CHECKLIST

SET 2. The line graph shows the data about the distance travelled by two friends on five different days. Read the data and answer the following questions.

लाइन ग्राफ में दो दोस्तों द्वारा पाँच अलग-अलग दिनों में तय की गई दूरी का डेटा दिखाया गया है। डेटा को पढ़ें और निम्नलिखित प्रश्नों का उत्तर दें।



1. Determine the difference between Kailash's travel distance on Tuesday and Wednesday combined and Arun's travel distance on Thursday and Friday combined.

कैलाश द्वारा मंगलवार और बुधवार को तय की गई दूरी के योग और अरुण द्वारा गुरुवार और शुक्रवार को तय की गई दूरी के योग के बीच अंतर निर्धारित करें।

- (A) 120
- (B) 140
- (C) 100
- (D) 155
- (E) None of these

2. The distance that Arun travelled on Saturday is $(D-20)\%$ of the average distance that Arun travelled on Wednesday, Thursday, and Friday, and the distance that Kailash travelled on Saturday is $D\%$ of the total distance that Kailash travelled on Monday, Tuesday, and Wednesday. If the total distance that Arun and Kailash travelled on Saturday is 372 km and the distance that Arun travelled on Saturday is 52 km, then find $(D+5)\%$ of the distance that Arun travelled on Wednesday.

अरुण द्वारा शनिवार को तय की गई दूरी $(D-20)\%$ है उस औसत दूरी का जो अरुण ने बुधवार, गुरुवार और शुक्रवार को तय की थी। वहीं, कैलाश द्वारा शनिवार को तय की गई दूरी $D\%$ है उस कुल दूरी का जो कैलाश ने सोमवार, मंगलवार और बुधवार को तय की थी। यदि शनिवार को अरुण और कैलाश ने कुल 372 किमी दूरी तय की और अरुण ने शनिवार को 52 किमी दूरी तय की, तो $(D+5)\%$ का मान खोजें, जो अरुण द्वारा बुधवार को तय की गई दूरी है।

- (A) 162 km
- (B) 122 km
- (C) 151 km
- (D) 128 km
- (E) None of these

3. The distance travelled by Yogesh & Ankush on Wednesday is '2a' & '3a' more than the distance travelled by Arun & Kailash on Wednesday respectively and distance travelled by Yogesh on Wednesday is 37.5% more than the distance travelled by Kailash on Tuesday and time taken by Yogesh & Ankush to cover their respective distance is 4

hours & 5 hours respectively, then speed of Yogesh on Wednesday is what percent of the speed of Ankush on Wednesday?

योगेश और अंकुश द्वारा बुधवार को तय की गई दूरी क्रमशः अरुण और कैलाश द्वारा बुधवार को तय की गई दूरी से '2a' और '3a' अधिक है। योगेश द्वारा बुधवार को तय की गई दूरी कैलाश द्वारा मंगलवार को तय की गई दूरी से 37.5% अधिक है। योगेश और अंकुश ने अपनी-अपनी दूरी को तय करने में क्रमशः 4 घंटे और 5 घंटे लिए। तो, बुधवार को योगेश की गति बुधवार को अंकुश की गति का कितना प्रतिशत है?

- (A) 128.42%
- (B) 131.53%
- (C) 136.47%
- (D) 171.88%
- (E) None of these

4. 66.66% of the distance travelled by Arun & 40% of the distance travelled by Kailash on Thursday is travelled by car & rest is travelled by bike, and 12.5% & 8.33% of the distance travelled by bike is travelled on Kawasaki bike & rest is travelled on Ninja bike respectively, then sum of the distance travelled by Kawasaki bike & distance travelled by Ninja bike is how much more or less than the distance travelled by Kailash on Monday?

गुरुवार को अरुण द्वारा तय की गई दूरी का 66.66% और कैलाश द्वारा तय की गई दूरी का 40% कार से तय किया गया और शेष बाइक से। बाइक से तय की गई दूरी का क्रमशः 12.5% और 8.33% कावासाकी बाइक और निंजा बाइक से तय किया गया। तो, कावासाकी और निंजा बाइक से तय की गई दूरी का योग कैलाश द्वारा सोमवार को तय की गई दूरी से कितना अधिक या कम है?

- (A) 112 km less
- (B) 105 km more
- (C) 142 km less
- (D) 108 km more
- (E) None of these

5. On Thursday, Arun & Kailash covered the distance with a speed of 40 kmph & 20 kmph and then find the ratio between the time taken by Arun and the time taken by Kailash?

गुरुवार को अरुण और कैलाश ने क्रमशः 40 किमी/घंटा और 20 किमी/घंटा की गति से दूरी तय की। तो, अरुण और कैलाश द्वारा लिए गए समय का अनुपात क्या है?

- (A)5:6
 (B)4:5
 (C)3:4
 (D)2:3
 (E)None of these

CHECKLIST

Solutions

We are given :

Day	Distance travelled by Arun(in km)	Distance travelled by Kailash(in km)
Monday	220	280
Tuesday	400	320
Wednesday	360	200
Thursday	240	160
Friday	180	100

- (C)100 {420-520 =100}
- (A)162 km {the sum of the distance travelled by Arun & Kailash on Saturday is 372 km & the distance travelled by Arun on Saturday is 52 km so distance travelled by Kailash on Saturday is = 372-52 = 320, and distance travelled by Kailash on Saturday is D% of the total distance travelled by Kailash on Monday, Tuesday & Wednesday so $D\% = 320/800 * 100 = 40\%$ so D =40 so (D+5)% of the distance travelled by Arun on Wednesday = 45% of 360 = 162 km}
- (D)171.88% {distance travelled by Yogesh on Wednesday is 37.5% more than the distance travelled by Kailash on Tuesday so distance travelled by Yogesh on Wednesday = $11/8$ of 320 = 440 km so $360+2a = 440$ & $2a = 80$ & $a = 40$ so distance travelled by Ankush on Wednesday = $200+3a = 200+120 = 320$ km and time taken by

Yogesh & Ankush to cover their respective distance is 4 hours & 5 hours respectively so speed of Yogesh on Wednesday = $440/4 = 110$ kmph and speed of Ankush on Wednesday = $320/5 = 64$ kmph. Required answer = $110/64 * 100 = 171.88\%$

4. (A) 112 km less {66.66% of the distance travelled by Arun & 40% of the distance travelled by Kailash on Thursday is travelled by car & rest is travelled by bike so distance travelled by Arun(bike) = $1/3$ of 240 = 80 km & distance travelled by Kailash(bike) = $3/5$ of 160 = 96 km and also 12.5% & 8.33% of the distance travelled by bike is travelled on Kawasaki bike & rest is travelled on Ninja bike respectively so distance travelled by Arun(Ninja bike) = $7/8$ of 80 = 70 and distance travelled by Kailash(Ninja bike) = $11/12$ of 96 = 88 km so required answer = $(70+88) - 280 = 158-280 = 112$ km less}
5. (C) 3:4

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

The sum of the number of Quillboat and Canva courses sold by Anees is 4240, which is 47.22% more than the total number of Quillboat and Canva courses sold by Pranjal. The number of Canva courses sold by Rohit is 590 more than the number of Quillboat courses sold by him. The ratio of the number of Canva courses sold by Anees to the number of Canva courses sold by Pranjal is 7:4, respectively. The number of Canva courses sold by Rohit is 400 less than the number of Canva courses sold by Anees. The ratio of the number of Quillboat courses sold by Pranjal to Manish is 4:3, respectively. The number of Canva courses sold by Manish is 3300 less than the total number of Quillboat courses sold by Pranjal, Manish, and Anees. The number of Canva courses sold by Pranjal is 320 more than the number of Quillboat courses sold by Pranjal.

कुल Quillboat और Canva कोर्स जो अनीस ने बेचे हैं, वह 4240 हैं, जो प्रांजल द्वारा बेचे गए कुल Quillboat और Canva कोर्स से 47.22% अधिक हैं। रोहित द्वारा बेचे गए Canva कोर्स, उसके द्वारा बेचे गए Quillboat कोर्स से 590 अधिक हैं। अनीस द्वारा बेचे गए Canva कोर्स और प्रांजल द्वारा बेचे गए Canva कोर्स का अनुपात क्रमशः 7:4 है। रोहित द्वारा बेचे गए Canva कोर्स, अनीस द्वारा बेचे गए Canva कोर्स से 400 कम हैं। प्रांजल और मनीष द्वारा बेचे गए Quillboat कोर्स का अनुपात क्रमशः 4:3 है। मनीष द्वारा बेचे गए Canva कोर्स, प्रांजल, मनीष और अनीस द्वारा बेचे गए कुल Quillboat कोर्स से 3300 कम हैं। प्रांजल द्वारा बेचे गए Canva कोर्स, प्रांजल द्वारा बेचे गए Quillboat कोर्स से 320 अधिक हैं।

1. The number of Canva course sold by Pranjal is what percent of number of Quillboat course sold by Rohit?

प्रांजल द्वारा बेचे गए Canva कोर्स, रोहित द्वारा बेचे गए Quillboat कोर्स का कितना प्रतिशत हैं?

- (A) 102.4%
- (B) 125%
- (C) 162.5%
- (D) 127.8%
- (E) None of these

2. Find the ratio between the number of Quillboat course sold by Pranjal and number of Quillboat course sold by Rohit.

प्रांजल द्वारा बेचे गए Quillboat कोर्स और रोहित द्वारा बेचे गए Quillboat कोर्स के बीच अनुपात ज्ञात करें।

- (A) 25:27
- (B) 32:25
- (C) 15:28
- (D) 14:25
- (E) None of these

3. Total number of courses sold by Rohit is how much more or less than total number of courses sold by Anees?

रोहित द्वारा बेचे गए कुल कोर्स, अनीस द्वारा बेचे गए कुल कोर्स से कितना अधिक या कम हैं?

- (A) 1120 more
- (B) 1150 less
- (C) 1250 more
- (D) 1100 less
- (E) None of these

4. Find the average number of Canva courses sold by Pranjal, Rohit and Manish.
 प्रांजल, रोहित और मनीष द्वारा बेचे गए Canva कोर्स की औसत संख्या ज्ञात करें।
 (A)1540
 (B)1280
 (C)1240
 (D)1720
 (E)None of these
5. Find 32.22% of 200% of total number of courses sold by Manish.
 मनीष द्वारा बेचे गए कुल कोर्स के 200% का 32.22% ज्ञात करें।
 (A)1900
 (B)1320
 (C)1250
 (D)1740
 (E)None of these

Solutions

	Canva course	Quillboat course	Total
Anees	2240	2000	4240
Pranjal	1280	1600	2880
Rohit	1840	1250	3090
Manish	1500	1200	2700
	6860	6050	12910

1. (A)102.4%
2. (B)32:25
3. (B)1150 less
4. (A)1540
5. (D)1740

CHECKLIST

BY

AASHISH

ARORA