FOR SBI IBPS PO PRE

2025

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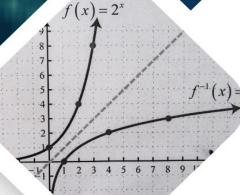
سرارى

# QUANT CHECKLIST

Practice Module by Aashish Arora

 $\frac{x^{2}}{a^{2}} + \frac{y^{2}}{b^{2}} + \frac{z^{2}}{c^{2}} = 0$   $||a||y||_{2} = \frac{1}{\sqrt{1 - 2bc}} \cos \frac{x^{2}}{a^{2}} + \frac{y^{2}}{b^{2}} + \frac{z^{2}}{a^{2}} = 0$ 

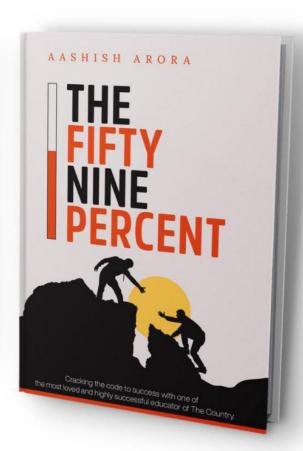
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#### THE FIFTY NINE PERCENT

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) 32% of 550 + 18% of 150 15% of 160 = ? 29
- (a) 206
- (b) 209
- (c) 230
- (d) 208
- (e) None of these
- (2) (5/7) of 588 + (8/19) of 912 (7/23) of 759 = ? \* 4
- (a) 143.25
- (b) 142.25
- (c) 140.25
- (d) 144.25
- (e) None of these

(3) 
$$(115 \times 34) + 28^2 - 37^2 = ? \times 25 \times 7$$

- (a) 11
- (b) 19
- (c) 17
- (d) 15

(e) None of these

$$(4) (18.99 \times 17.04) - (23.01 \times 12.98) + (108 \times 7.04) + (12 \times 14.99) = ? \times 12$$

- (a) 64
- (b) 82
- (c) 80
- (d) 120
- (e) None of these

(5) 
$$\sqrt{3136} \times \sqrt{7056} \div 14$$
 of  $12 = ? \div 5$ 

- (a) 120
- (b) 130
- (c) 160
- (d) 140
- (e) None of these

- (a) 254
- (b) 265
- (c) 245
- (d) 255
- (e) None of these

(7) 
$$47.66\%$$
 of  $936 - 7.69\%$  of  $1183 + 18.18\%$  of  $968 = ? X 52$ 

- (a) 15
- (b) 14

- (c) 19
- (d) 16
- (e) None of these

(8) 
$$\{(18^2) \div (9)^2 \times 14\} + 256 = ? \times 16$$

- (a) 14.5
- (b) 16.3
- (c) 17.8
- (d) 19.5
- (e) None of these

(9) 
$$(182.56 + 2045.32 - 1056.38 - 708.24 - 112.26) \div 9 = ?$$

- (a) 39
- (b) 37
- (c) 31
- (d) 32
- (e) None of these

$$(10) \{(2028 \div 13) X7 + 1596 \div 19\} = ? X8$$

- (a) 144
- (b) 147
- (c) 148
- (d) 142
- (e) None of these

$$(11)$$
 7(7/8) + 8(3/4) - 4(1/2) - 6 (5/4) +2 (3/8) +5 (3/2)= ? PAGE 8

- (a) 12(3/4)
- (b) 15(1/3)
- (c) 13(3/4)
- (d) 13(1/3)
- (e) None of these

$$(12) (144 \times 4 \times 25) \% \times (125) \% = ?X 15$$

- (a) 20
- (b) 40
- (c) 45
- (d) 15
- (e) None of these

$$(13) (784 + 125) \div 9 + (964 - 124) \div 14 - (961 - 151) \div 27 = ?$$

- (a) 131
- (b) 130
- (c) 132
- (d) 134
- (e) None of these

$$(14) 12/7 + 5/3 - 6/7 - 2/3 + 19/7 = ? \div 63$$

- (a) 234
- (b) 542
- (c) 428
- (d) 732
- (e) None of these

$$(15)(52/7) \div (13/63) + 23^2 = ? - 484 \div 22$$

- (a) 530
- (b) 580
- (c) 587
- (d) 540
- (e) None of these

$$(16) 72/18 \div 9/126 + 17/52 \div 2/104 = ?X4 - 185$$

- (a) 69.5
- (b) 67.1
- (c) 65.5
- (d) 64.5
- (e) None of these

$$(17)(1562 + 562 + 62 + 2) \div 4 = ?-(2124 - 124 - 24 - 4) \div 4$$

- (a) 1040
- (b) 1021
- (c) 1019
- (d) 1024
- (e) None of these

(18) ? 
$$X 5 - 3325 \times 19 = \sqrt{18\%}$$
 of 250+60% of 300

- (a) 30
- (b) 35
- (c) 36

- (d) 38
- (e) None of these
- $(19) (9/17) \text{ of } 5712 + 33^2 48^2 = ?*201$
- (a) 7
- (b) 9
- (c) 5
- (d) 6
- (e) None of these
- $(20) 8^4 \div (512) \% * (4096) \% \text{ of } (512) \% = 8*$
- (a) 8
- (b) 6
- (c) 7
- (d) 9
- (e) None of these

#### Answers:

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

- (9) a
- (10) b
- (11) c
- (12) b
- (13) a
- (14) e
- (15) c
- (16) d
- (17) a
- (18) d
- (19) b
- (20) a

#### Solutions:

$$(1) 176 + 27 - 24 = ? - 29$$

$$(2) 420 + 384 - 231 = ? x 4$$

3325/25\*7

=19

(4) 
$$19 * 17 - 23 * 13 + 108 * 7 + 12 * 15 = 12x$$

$$323 - 299 + 756 + 180 = 12x$$

$$= 28 \times 5 = 140$$

(6) 
$$180 \times 120 \div 48 - 24 = ? + 172$$

$$(7) 5/12 \text{ of } 936 - 1/13 \text{ of } 1183 + 2/11 \text{ of } 968 = 25x$$

$$390-92 + 176 = 25x$$

$$(8) 324/81 \times 14 + 256 = 16x$$

$$(9) 351/9 = 39$$

$$(10) 156 X 7 + 84 = 8x$$

$$1092 + 84 = 8x$$

$$(11)$$
 12 +  $(-7 + 6 - 4 - 10 + 3 + 12/8) = ?$ 

$$55/4 = 13(3/4)$$

$$(12)(14400)$$
½ \* 5 = 15x

$$(13) 909/9 + 840/14 - 810/27 = ?$$

$$(14) 36 + 35 - 18 - 14 + 57 / 21 = ? / 63 96 / 21 * 63 = 288$$

$$(15)$$
 52/7 \* 63/13 + 529 =?-22

$$(16)$$
 72/18 X 126/9 + 17/52 X 104/2 = 4x - 185

$$56 + 17 = 4x - 185$$

$$73 + 185 = 4x$$

$$(17) 2188 \div 4 = ?-1972 \div 4$$

$$(18) 5x - 175 = \sqrt{45} + 180$$

$$5x - 175 = \sqrt{225}$$

$$5x = 15 + 175$$

$$(19) 3024 + 1089 - 2304 = ?*201$$

(20)  $8^4$ ÷ (512)½ \* (4096)¾ of (512)½ =8\*

$$8^8 = 8^*$$

### AASHISH ARORA

CHECKLIST FOR BANK EXAMS 2025 BY AASHISH ARORA



#### 2. ARITHMETIC QUESTIONS

(1) A shopkeeper marked the selling price of (a+4) boxes and (a-4) pens at Rs 528. If the price of each box is Rs12 and the price of each pen is Rs 24. Find the selling price of "a" boxes?

एक दुकानदार ने (a+4) डिब्बों और (a-4) कलमों का विक्रय मूल्य 528 रुपये अंकित किया। यदि प्रत्येक डिब्बे का मूल्य 12 रुपये और प्रत्येक कलम का मूल्य 24 रुपये है। "a" डिब्बों का विक्रय मूल्य ज्ञात कीजिए?

- (a)₹ 192
- (b)₹ 194
- (c)₹ 116
- (d)₹ 198
- (e) None of these
- (2) The ratio of the weights of P and Q is 5:4 and the ratio of the weight of P and R is 2:1. The sum of the weights of P and R is 90kg. The weight of S is 12.5% less than that of Q. Find the sum of weight of R and S?

P और Q के वजन का अनुपात 5:4 है और P और R के वजन का अनुपात 2:1 है। P और R के वज़न का योग 90 किग्रा है। S का वजन Q के वजन से 12.5% कम है। R और S के वजन का योग जात करें?

- (a)52
- (b)62
- (c)42
- (d)72
- (e) None of these

(3) The ratio of two numbers is 5:6 and their LCM is 180. Find the sum of the cube of the two numbers?

दो संख्याओं का अनुपात 5:6 है और उनका LCM 180 है। दोनों संख्याओं के घन का योग ज्ञात कीजिए?

- (a)76356
- (b)77656
- (c)73656
- (d)74656
- (e) None of these
- (4) An article having cost price of Rs 4800 and is marked 83.33% above its cost price. Find the selling price of the article if the discount offered on the same article is Rs 1250 more than the profit earned on it?

एक वस्तु का लागत मूल्य 4800 रुपये है और उस पर लागत मूल्य से 83.33% अधिक अंकित है। वस्तु का विक्रय मूल्य ज्ञात कीजिए यदि उसी वस्तु पर दी गई छूट उस पर अर्जित लाभ से 1250 रुपये अधिक है?

- (a)6275
- (b)6175
- (c)6125
- (d)6225
- (e) None of these
- (5) From a well-shuffled pack of 52 cards, a card is drawn at random. Find the probability that it is either a club or queen?
- 52 कार्ड के एक अच्छी तरह से फेंटे गए पैक से, एक कार्ड याद्दच्छिक रूप से निकाला जाता है। संभावना ज्ञात कीजिए कि यह या तो क्लब या रानी है?

- (a)2/13
- (b)5/13
- (c)4/13
- (d)6/13
- (e) None of these
- (6) If due to a 18% decrease in the price of wheat, Anuj can buy 6kg more wheat in Rs 300, then find the new price per kg of wheat?

यदि गेहूं की कीमत में 18% की कमी के कारण अनुज 300 रुपये में 6 किलोग्राम अधिक गेहूं खरीद सकता है, तो प्रति किलोग्राम गेहूं की नई कीमत ज्ञात कीजिए?

- (a)7
- (b)4
- (c)9
- (d)10
- (e) None of these
- (7) Two trains are running towards each other from Delhi and Mumbai which are 560 km apart. Both the trains left their respective station at 2pm with speed 48 km/hr and 32 km/hr respectively. Find the time taken by them to meet each other?

दो ट्रेनें दिल्ली और मुंबई से एक-दूसरे की ओर चल रही हैं जो 560 किमी दूर हैं। दोनों ट्रेनें क्रमशः 48 किमी/घंटा और 32 किमी/घंटा की गति के साथ दोपहर 2 बजे अपने संबंधित स्टेशन से खाना हुईं। उनके द्वारा एक दूसरे से मिलने में लिया गया समय ज्ञात कीजिये?

- (a)7
- (b)13

- (c)14
- (d)17
- (e) None of these
- (8) Arvind can do as much work in 7 days as Vabhav can do in 5 days and Vabhav can do as much work in 3 days as Sheenu in 4 days. In what time will Vabhav do a piece of work which Arvind can do in two weeks?

अरविंद 7 दिनों में उतना काम कर सकता है जितना वभव 5 दिनों में कर सकता है और वभव उतना ही काम 3 दिनों में कर सकता है जितना शीन् 4 दिनों में कर सकती है। जिस कार्य को अरविन्द दो सप्ताह में कर सकता है, उसे वैभव कितने समय में करेगा?

- (a)4
- (b)3
- (c)6
- (d)10
- (e) None of these
- (9) In a class there are 12 boys and 18 girls. Average weight of each boy and each girl is 36 kg and 32 kg respectively. If the sum of weight of all the students and a teacher is 1064 kg, then find the weight of the teacher?

एक कक्षा में 12 लड़के और 18 लड़कियाँ हैं। प्रत्येक लड़के और प्रत्येक लड़की का औसत वजन क्रमशः 36 किलोग्राम और 32 किलोग्राम है। यदि सभी छात्रों और एक शिक्षक के वजन का योग 1064 किलोग्राम है, तो शिक्षक का वजन ज्ञात करें?

- (a)36
- (b)56
- (c)80
- (d)46

(e) None of these

(10) Shubhi started a business with Rs 60000 and was joined afterwards by Veeneta with Rs 70000. After how many months did Veeneta join, if the profit at the end of the year was divided in the ratio of 9:7?

शुभी ने 60000 रुपये के साथ एक व्यवसाय शुरू किया और बाद में 70000 रुपये के साथ वीनेता भी इसमें शामिल हो गई। यदि वर्ष के अंत में लाभ को 9:7 के अनुपात में विभाजित किया गया तो वीनीता कितने महीनों के बाद इसमें शामिल हुई?

- (a)2 Months
- (b)4 Months
- (c)6 Months
- (d)3 Months
- (e) None of these
- (11) In how many ways can the letter of the word "STAMPEDE" can be arranged?
  "STAMPEDE" शब्द के अक्षरों को कितने तरीकों से व्यवस्थित किया जा सकता है?
- (a)20160
- (b)20035
- (c)21032
- (d)21236
- (e) None of these
- (12) Two trains moving in opposite directions cross a man in 16 seconds and 29 seconds respectively, while they cross each other in 24 seconds. What is the ratio of their speeds?

विपरीत दिशाओं में चलने वाली दो रेलगाड़ियाँ एक आदमी को क्रमशः 16 सेकंड और 29 सेकंड में पार करती हैं, जबिक वे एक दूसरे को 24 सेकंड में पार करती हैं। उनकी गति का अनुपात क्या है?

- (a)7:8
- (b)5:8
- (c)6:8
- (d)4:8
- (e) None of these
- (13) Veeru started a business with a sum of 12,500 and incurred a loss of 10% in the first year and earned a profit of 5% and 10% in the second and the third year respectively. Find the net profit for the entire period of three years.

वीरू ने 12,500 की राशि के साथ एक व्यवसाय शुरू किया और पहले वर्ष में 10% की हानि उठाई और दूसरे और तीसरे वर्ष में क्रमशः 5% और 10% का लाभ कमाया। तीन वर्षों की संपूर्ण अवधि के लिए शुद्ध लाभ ज्ञात कीजिए।

- (a)493.75
- (b)143.75
- (c)703.50
- (d)223.75
- (e) None of these
- (14) Praveen is thrice as old as Nelu and Sneha is half as old as praveen. The sum of Sneha's and Nelu's age is 50 years. What is the age of Praveen (in years)?

प्रवीण की उम्र नेलू से तीन गुना और स्नेहा प्रवीण की उम्र से आधी है . स्नेहा और नीलू की आयु का योग 50 वर्ष है। प्रवीण की आयु (वर्षों में) क्या है?

(a)43

(b)32

(c)60

(d)86

(a)58

(b)48

(c)55

(d)49

(a)65:57

(b)56:67

(c)35:67

(d)55:67

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(e) None of these

(17) What is the volume of a sphere if the radius of the sphere is 4 cm? (Use  $\pi = 6$ ) यदि गोले की त्रिज्या 4 सेमी है तो गोले का आयतन क्या है? ( $\pi = 6$  का प्रयोग करें)

- (a)416 cm<sup>3</sup>
- (b)736 cm<sup>3</sup>
- (c)526 cm<sup>3</sup>
- $(d)512 cm^3$
- (e) None of these

(18)Raghav invests Rs. 136000 for 4 years at 16% SI. Personal tax at the rate of 15% is deducted from interest earned at the end of every year. Find the amount at the end of the 4th year?

राघव ने रु. का निवेश किया 16% साधारण ब्याज दर पर 4 वर्षों के लिए 136000 रु. प्रत्येक वर्ष के अंत में अर्जित ब्याज से 15% की दर से व्यक्तिगत कर काटा जाता है। चौथे वर्ष के अंत में राशि जात कीजिये?

- (a)201615
- (b)209984
- (c)210619
- (d)230620
- (e) None of these
- (19) PQRS is a rhombus, in which diagonal PR and QS are 6 cm and 14 cm respectively. Find the area of the rhombus.

PQRS एक समचतुर्भुज है, जिसके विकर्ण PR और QS क्रमशः 6 सेमी और 14 सेमी हैं। समचतुर्भुज का क्षेत्रफल ज्ञात कीजिए।

- (a)44 cm<sup>2</sup>
- (b)45 cm<sup>2</sup>
- (c)42 cm<sup>2</sup>
- (d)47 cm<sup>2</sup>
- (e) None of these

(20) Shintu and Pintu working alone can complete a work in 16 days and 48 days respectively. If Pintu starts working alone and after 8 days Shintu also joins Pintu, then in how many days the total work will be completed?

शिंदू और पिंदू अकेले काम करके एक काम को क्रमशः 16 दिन और 48 दिन में पूरा कर सकते हैं। यदि पिंदू अकेले काम करना शुरू कर दे और 8 दिन बाद शिंदू भी पिंदू के साथ शामिल हो जाए, तो कुल काम कितने दिनों में पूरा होगा?

- (a)18 days
- (b)30 days
- (c)15 days
- (d)38 days
- (e) None of these

**Answers:** 

- (1)a
- (2)d
- (3)c

(4)b

(5)c

(6)c

(7)a

(8)d

(9)b

(10)b

(11)a

(12)b

(13)a

(14)c

(15)a

(16)d

(17)d

(18)b

(19)c

(20)a

Solutions:

(1)

528=(a+4)\*12 + (a-4)\*24

528=12a + 48 + 24a - 96

a=16

Selling price of 12 box= 16\*12

= 192

(2)

Ratio of weight of P Q R = 10:8:5

P+R=90

15 units=90

1 unit=6

P=60

Q=48

R=30

S=42

Required sum= 30+42

= 72

(3)

1st number=5x

2nd number=6x

LCM of two numbers=30

30x=180

x=6

Hence two number are 30 and 36

Required sum=30<sup>3</sup>+36<sup>3</sup>

= 73656

(4)

CP=4800

MP=8800

{CP:MP=6:11}

Profit earned= x

Discount offered=x+1250

x+x+1250=4000

2x=2750

x=1375

SP=1375+4800

=6175

#### (5)

Probability of getting club=13/52

Probability of getting Queen=4/52

Required probability=13/52+4/52-1/52

#### (6)

New price of wheat= 18\*300/6\*100

= 9

Time taken = 560/RV

Relative Speed = 560/48+32

= 560/80

= 7

A:V=7:5

V:S=3:4

```
A:V:S=21:15:20
```

Time taken by Arvind = 14 days

Time taken by Vabhav = 15\*14/21

= 10

(9)

Total weight= 12\*36+18\*32

= 1008

Teacher weight= 1064-1008

= 56

(10)

Let Veeneta join for x month

X = 8

Veeneta joined after= 12-8

= 4 Months

(11)

Total letter= 8

Repetition= e (2 times)

= 20160

(12)

Speed of 1st train=x

Speed of 2nd train=y

Length of 1st train=x\*16

Length of 2nd train=y\*29

$$ATQ = 16x + 29y/x + y = 24$$

$$16x + 29y = 24x + 24y$$

$$8x = 5y$$

So, 5:8

(13)

Net profit= (12500\*90/100 \*105/100 \*110/100 -12500)

=12500-12993.75

= 493.75

(14)

Age of Nelu be =x

Age of Praveen=3x

Age of Sneha=1.5x

ATQ, 2.5x=50

$$x = 20$$

Praveen age= 3\*20

= 60

(15)

On diving 1840 by 66,

the remainder is 58

So, required number=58

(16)

Present age of Vimal=15x

Present age of Rajni=17x

$$15x - 6/19x - 6 = 13/17$$

$$255x - 102 = 247x - 78$$

$$8x = 24$$

$$x = 3$$

Required ratio= 15\*3+10 : 19\*3 +10

(17)

Required volume=  $4/3\pi r^3$ , where r is the radius of the sphere.

$$=4/3 *6* 4³ = 512 cm³$$

(18)

1 year = 136000\*16/100 = 21760

Personal tax = 21760\*85/100 = 18496

So, for 4 years=18496\*4= 73984

Amount= 136000+ 73984

(19)

Area of rhombus= 1/2\* product of diagonals

$$= 42 cm^{2}$$

(20)

Shintu=16

Pintu=48

LCM=48

Efficiency of Shintu=48/16= 3 units

Efficiency of Pintu=48/48= 1 unit

Pintu worked alone for 8 days = 8\*1

=8 unit

Left work done by both= 48-8

= 40/4 = 10

So, required day = 8+10 = 18 days

### AASHISH ARORA

#### 3. Quadratic Equations

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

(b) 
$$x < y$$

(c) x = y or the relationship cannot be established

(d) 
$$x \ge y$$

(e) 
$$x \le y$$

1.) I. 
$$x^2 - 56x + 768 = 0$$

II. 
$$y^2 - 45y + 504 = 0$$

2.) I. 
$$4x^2 + 15x - 81 = 0$$

II. 
$$6y^2 - 54y + 108 = 0$$

3.) I. 
$$x^2 - 36x + 323 = 0$$

II. 
$$y^2 - 44y + 483 = 0$$

4.) I. 
$$3x^2 + 10x - 125 = 0$$

II. 
$$5y^2 - 10y - 75 = 0$$

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

II. 
$$y^2 - 35y + 304 = 0$$

6.) I. 
$$x^2 - 13x + 24 = -2x - 6$$
  
II.  $y^2 + 7y - 18 = 0$ 

7.) I. 
$$5x^2 = 1805$$

II. 
$$y = \sqrt[3]{6859}$$

8.) I. 
$$x^2 - 31x + 238 = 0$$

II. 
$$y^2 - 40y + 399 = 0$$

9.) I. 
$$2x^2 - 22x + 56 = 0$$

II. 
$$6y^2 + 37y - 98 = 0$$

10.) I. 
$$x^2 - 50x + 609 = 0$$

II. 
$$y^2 - 31y + 228 = 0$$

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

II. 
$$7y^2 - 56y + 105 = 0$$

12.) I. 
$$x^2 - 25x + 156 = 0$$

II. 
$$y^2 - 23y + 132 = 0$$

13.) I. 
$$3x^2 - 30x + 72 = 0$$

II. 
$$5y^2 - 50y + 125 = 0$$

14.) I. 
$$3x^3 - 1582 = 5009$$
II.  $\sqrt{y^2 - 41} = \sqrt{576} + \sqrt{256}$ 

15.) I. 
$$x^2 - 38x + 361 = 0$$
  
II.  $y^2 - 22y + 121 = 0$ 

16.) I. 
$$2x^2 + 3x - 44 = 0$$
II.  $4y^2 - 47y + 124 = 0$ 

17) I. 
$$x^2 - 30x + 144 = -6x + 16$$
II.  $y^2 - 8y - 153 = 0$ 

18.) I. 
$$x^2 + 3x - 304 = 0$$
  
II.  $y^2 - 36y + 323 = 0$ 

19.) I. 
$$12x^2 - 60x + 72 = 0$$
II.  $5y^2 - 15y + 10 = 0$ 

20.) I. 
$$x^2 - 16x + 63 = 0$$
  
II.  $y^2 - 30y + 216 = 0$ 

Answers:

- 3. B
- 4. C
- 5. B
- 6. A
- 7. E
- 8. B
- 9. A
- 10. A
- 11. E
- 12. D
- 13. C
- 14. B
- 15. A
- 16. E
- 17. C
- 18. B
- 19. D
- 20. B

Answers:

$$(1) x = 32,24$$

$$y = 24,21$$

$$(2) x = -27/4,3$$

$$y = 6,3$$

$$(3) x = 17,19$$

$$y = 23,21$$

$$(4) x = -25/3,5$$

$$y = 5,-3$$

$$(5) x = -8.7$$

$$y = 19,16$$

$$(6) x = 7.4$$

$$y = 2,-9$$

$$(7) x = 19,-19$$

$$y = 19$$

$$(8) x = 17,14$$

$$(9) x = 7,4$$

$$y = -49/6,2$$

$$(10) x = 29,21$$

$$y = 19,12$$

$$(11) x = 3,3$$

$$y = 3.5$$

$$(12) x = 13,12$$

$$y = 11,12$$

$$(13) x = 6,4$$

$$y = 5,5$$

CHECKLIST

$$(14) x = 13$$

$$y = +81$$

$$(16) x = -11/2,4$$

$$y = 31/4,4$$

$$(17) x = 16.8$$

$$y = 17,-9$$

$$(18)$$
) x = 16,-19

$$y = 17,19$$

$$(19) x = 3,2$$

$$y = 2,1$$

$$(20) x = 9,7$$

## 4. WRONG NUMBER SERIES

- (1) 70, 239, 383, 505, 604, 685
- (a) 505
- (b) 239
- (c)685
- (d) 70
- (e) None of these
- (2) 20, 37, 105, 423, 2109, 12647
- (a) 37
- (b) 2109
- (c) 105
- (d) 12647
- (e) None of these
- (3) 5, 19, 80, 325, 1306, 5231
- (a) 19
- (b) 325
- (c) 80
- (d)5
- (e) None of these
- (4) 45, 52, 70, 102, 163, 260
- (a) 52
- (b) 163

- (c) 45
- (d)70
- (e) None of these
- (5) 1500, 300, 150, 32, 15
- (a) 15
- (b) 300
- (c) 150
- (d) 1500
- (e) None of these
- (6) 500, 429, 368, 320, 284, 260
- (a) 368
- (b) 429
- (c) 260
- (d) 320
- (e) None of these
- (7) 112, 141, 162, 177, 188, 200
- (a) 141
- (b) 188
- (c) 200
- (d) 162
- (e) None of these
- (8) 125, 140, 155, 185, 225, 275
- (a) 155

- (b) 225
- (c) 275
- (d) 185
- (e) None of these
- (9) 145, 60, 205, 265, 470, 740
- (a) 60
- (b) 740
- (c) 470
- (d) 145
- (e) None of these
- (10) 29, 35, 50, 53, 65, 79
- (a) 35
- (b) 50
- (c) 65
- (d) 79
- (e) None of these
- (11) 575, 566, 554, 540, 521, 500
- (a) 521
- (b) 540
- (c) 500
- (d) 575
- (e) None of these
- (12) 102, 109.5, 128.5, 157, 195, 242.5

- (a) 102
- (b) 195
- (c) 157
- (d) 242.5
- (e) None of these
- (13) 15, 22, 60, 230, 1145, 6866
- (a) 60
- (b) 15
- (c) 1145
- (d) 6866
- (e) None of these
- (14) 175, 150, 134, 125, 121, 125
- (a) 121
- (b) 125
- (c) 175
- (d) 134
- (e) None of these
- (15) 775, 733, 705, 683, 671, 665
- (a) 733
- (b) 671
- (c)665
- (d) 705
- (e) None of these

- (16) 201684, 28812, 4116, 588, 85, 12
- (a) 85
- (b) 28812
- (c) 12
- (d) 4116
- (e) None of these
- (17) 98, 101.5, 107, 111.5, 118, 125.5
- (a) 101.5
- (b) 107
- (c) 125.5
- (d) 98
- (e) None of these
- (18) 665, 835, 690, 859, 715, 884
- (a) 859
- (b) 690
- (c) 835
- (d) 715
- (e) None of these
- (19) 250, 50, 350, 70, 495, 98
- (a) 98
- (b) 350
- (c) 250
- (d) 495
- (e) None of these

- (20) 2, 6, 25, 120, 720, 5040
- (a) 6
- (b) 5040
- (c) 25
- (d) 720
- (e) None of these

### **Answers**

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

- (19) d
- (20) c

### **Solutions**

$$(1) +13^2$$
,  $+12^2$ ,  $+11^2$ ,  $+10^2$ ,  $+9^2$ 

$$(5) \div 5, \div 2, \div 5, \div 2, \div 5$$

$$(6)$$
 -72, -60, -48, -36, -24

$$(8) +10, +20, +30, +40, +50$$

(9) Sum of the previous two numbers

$$(10)$$
 +2\*3, +2\*4, +2\*5, +2\*6, +2\*7

$$(12) +1*9.5, +2*9.5, +3*9.5, +4*9.5, +5*9.5$$

$$(14)$$
 -5<sup>2</sup>, -4<sup>2</sup>, -3<sup>2</sup>, -2<sup>2</sup>, -1<sup>2</sup>

$$(16)$$
 ÷7, ÷7, ÷7, ÷7

$$(17) +3.5, +4.5, +5.5, +6.5, +7.5$$

$$(18) +13^2, -12^2, +13^2, -12^2, +13^2$$

$$(19) \div 5, *7, \div 5, *7, \div 5$$

## 5. MISSING NUMBER SERIES

- (1) ?, 274, 130, 230, 166, 202
- (a) 87
- (b) 78
- (c)75
- (d)71
- (e)70
- (2) 175, ?, 227, 247, 263, 275
- (a) 302
- (b) 200
- (c) 203
- (d) 208
- (e) None of these
- (3) 1275, 1288.5, ?, 1312.5, 1323, 1332.5
- (a) 1301
- (b) 1300
- (c) 1311
- (d) 1306
- (e) 1113
- (4) 83, 29, 112, ?, 253, 394
- (a) 140

- (b) 114
- (c) 141
- (d) 134
- (e) 113
- (5) 14, 34, 95, 279, ?, 2492
- (a) 823
- (b) 832
- (c) 833
- (d) 830
- (e) 841
- (6) 1080, 540, 180, 90, 30, ?
- (a) 55
- (b) 50
- (c) 25
- (d) 5
- (e) 15
- (7) 1650, 1641.5, 1634, 1627.5, ?, 1617.5
- (a) 1611
- (b) 1600
- (c) 1711
- (d) 1177
- (e) 1622
- (8) 644, 616, 581, 539, ?, 434

- (a) 491
- (b) 490
- (c) 499
- (d) 401
- (e) 409
- (9) 219, 543, ?, 995, 1139, 1239
- (a) 799
- (b) 709
- (c) 711
- (d) 700
- (e) None of these
- (10) 1580, ?, 1440, 1400, 1380, 1380
- (a) 1511
- (b) 1501
- (c) 1500
- (d) 1599
- (e) 1155
- (11) ?, 156, 188, 226, 270, 320
- (a) 130
- (b) 131
- (c) 113
- (d) 110
- (e) 103

- (12) 5, 10, ?, 160, 785, 3910
- (a) 53
- (b) 30
- (c)35
- (d) 31
- (e) 39
- (13) 1665, ?, 824.5, 1232.75, 2461.5, 6149.75
- (a) 828.5
- (b) 800
- (c) 825.5
- (d) 824.5
- (e) 820
- (14) 4030, 3922, 3838, ?, 3742, 3730
- (a) 3770
- (b) 3771
- (c) 3778
- (d) 3772
- (e) 3779
- (15) 60, 84.5, 108, 130.5, 152, ?
- (a) 170.5
- (b) 171
- (c) 171.5
- (d) 172.5
- (e) 170

- (16) 32, 49, 83, 151, ?, 559
- (a) 277
- (b) 270
- (c) 288
- (d) 278
- (e) 287
- (17) 5, 517, 860, ?, 1201, 1265
- (a) 1073
- (b) 1011
- (c) 1076
- (d) 1170
- (e) 1117
- (18) 33590, ?, 1340, 265, 50, 7 (a) 6700
- (b) 6710
- (c) 6715
- (d) 6711
- (e) None of these
- (19) 26, 36, 54, ?, 122, 176
- (a) 80
- (b) 82
- (c)89
- (d) 81

(e)86

- (20) 1160, 1135, ?, 1110, 1106, 1105
- (a) 1119
- (b) 1110
- (c) 1111
- (d) 1112
- (e) 1122

## **Answers**

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

- (18) c
- (19) b
- (20) a

## **Solutions**

$$(1) + 14^2$$
,  $-12^2$ ,  $+10^2$ ,  $-8^2$ ,  $+6^2$ 

$$(2) +28, +24, +20, +16, +12$$

$$(3) +13.5, +12.5, +11.5, +10.5, +9.5$$

(4) Sum of the previous two numbers

$$(6) \div 2, \div 3, \div 2, \div 3, \div 2$$

$$(7)$$
 -8.5, -7.5, -6.5, -5.5, -4.5

$$(9) +18^2$$
,  $+16^2$ ,  $+14^2$ ,  $+12^2$ ,  $+10^2$ 

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

$$(16)$$
 +17, +34, +68, +136, +272

$$(17) + 8^3, +7^3, +6^3, +5^3, 4^3$$

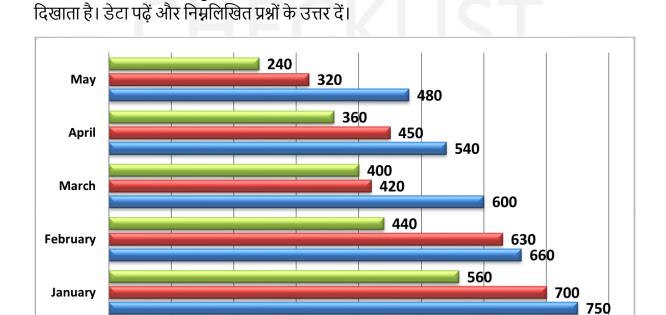
$$(18) \div 5-3, \div 5-3, \div 5-3, \div 5-3, \div 5-3$$

$$(19) +5*2, +6*3, +7*4, +8*5, +9*6$$

$$(20)$$
 -5<sup>2</sup>, -4<sup>2</sup>, -3<sup>2</sup>, -2<sup>2</sup>, -1<sup>2</sup>

## 6. DATA INTERPRETATION

**SET 1.** The bar graph shows the data about the number of three different types of diapers sold in five different shops. Read the data and answer the following questions. बार ग्राफ पाँच अलग-अलग दुकानों में बेचे गए तीन विभिन्न प्रकार के डायपरों की संख्या के बारे में डेटा



 The number of Mamypoko diapers sold in February is what percent of the number of Mamypoko diapers sold in April? फरवरी में बेचे गए Mamypoko डायपरों की संख्या, अप्रैल में बेचे गए Mamypoko डायपरों की संख्या का कितने प्रतिशत है?

400

■ no of Mamypoko diaper sold
■ no of Pampers diaper sold
■ no of Huggies diaper sold

500

600

800

(A)128.56%

100

200

300

- (B)144.44%
- (C)122.22%
- (D)131.25%
- (E)None of these

2. If the number of Huggies diapers sold in June is 12.5% less than the number of Huggies diapers sold in the previous month and the number of Pampers diapers sold in June is p% less/more than the number of Pampers diapers sold in the previous month, and if the number of Huggies diapers sold in June is 180 more than the number of Pampers diapers sold in June, then find p% of the number of Huggies diapers sold in March.

यदि जून में बेचे गए Huggies डायपरों की संख्या पिछले महीने की तुलना में 12.5% कम है और जून में बेचे गए Pampers डायपरों की संख्या पिछले महीने की तुलना में p% कम /अधिक है, और यदि जून में बेचे गए Huggies डायपरों की संख्या जून में बेचे गए Pampers डायपरों की संख्या से 180 अधिक है, तो Huggies डायपरों की मार्च में बेची गई संख्या का p% ज्ञात करें।

- (A)150
- (B)120
- (C)180
- (D)100
- (E)None of these
- 3. If the number of Pampers diapers sold in March is X% of the number of Huggies diapers sold in March and the number of Mamypko diapers sold in May is Y% of the number of Huggies diapers sold in May, then which of the following statements are true?

यदि मार्च में बेचे गए Pampers डायपरों की संख्या, मार्च में बेचे गए Huggies डायपरों की संख्या का X% है और मई में बेचे गए Mamypoko डायपरों की संख्या, मई में बेचे गए Huggies डायपरों की संख्या का Y% है, तो निम्नलिखित में से कौन-सा कथन सही है?

- I. X = 70, Y = (200/4)
- II. X = 30, Y = 50
- III. X = 14.28% of 700, Y = 500% of 10
- (A)Only I
- (B)Only II and III
- (C)Only I and III
- (D)only II
- (E)None of these

- 4. Find the ratio between the number of Mamypko diapers sold in April and the number of Mamypoko diapers sold in May.
  - अप्रैल में बेचे गए Mamypoko डायपरों की संख्या और मई में बेचे गए Mamypoko डायपरों की संख्या के बीच अनुपात ज्ञात करें।
  - (A)4:5
  - (B)3:2
  - (C)7:5
  - (D)9:7
  - (E)None of these
- 5. Find the average number of Pampers diapers sold in February, March and April. फरवरी, मार्च और अप्रैल में बेचे गए **Pampers** डायपरों की औसत संख्या ज्ञात करें।
  - (A)800
  - (B)350
  - (C)600
  - (D)500
  - (E)None of these

## Solution

From the bar graph:

Month	no of Huggies diaper sold	no of Pampers diaper sold	no of Mamypoko diaper sold
January	750	700	560
February	660	630	440
March	600	420	400
April	540	450	360
May	480	320	240

- 1. (C)122.22%
- 2. (A)150
- 3. (A)Only I {the number of Pampers diapers sold in March is X% of the number of Huggies diapers sold in March so X% = 420/600\*100 = 70% so X = 70 and the number of Mamypko diapers sold in May is Y% of the number of Huggies diapers sold in May so Y% = 240/480\*100 = 50% so Y = 50 therefore the answer is option (A)Only I }
- 4. (B)3:2
- 5. (D)500

# CHECKLIST

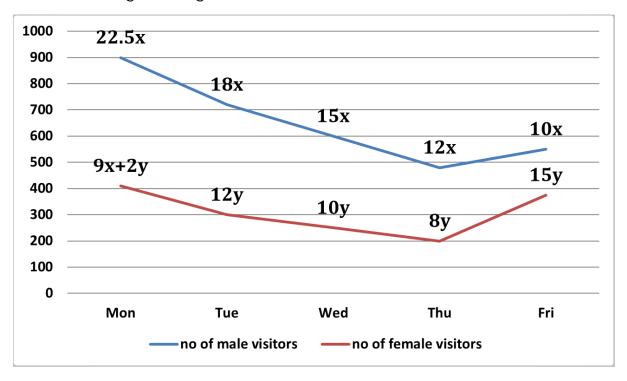
# AASHISH ARORA

**SET 2.** The line graph shows the data about membership of two OTT platforms sold in five different months. Read the data and answer the following questions.

Note: The average number of male visitors on Tuesday, Wednesday & Thursday is 600 and number of number of female visitors on Friday is 6.25% less than number of male visitors on Friday.

लाइन ग्राफ में पाँच विभिन्न महीनों में दो ओटीटी प्लेटफार्मों की सदस्यता से संबंधित डेटा दर्शाया गया है। डेटा पढें और निम्नलिखित प्रश्नों के उत्तर दें।

नोट: मंगलवार, बुधवार और गुरुवार को पुरुष दर्शकों की औसत संख्या 600 है और शुक्रवार को महिला दर्शकों की संख्या, शुक्रवार को पुरुष दर्शकों की संख्या से 6.25% कम है।



1. How much money is collected on Friday if the ticket price for male visitors is Rs. 40 and for female visitors is Rs. 25? यदि पुरुष दर्शकों के लिए टिकट की कीमत ₹40 और महिला दर्शकों के लिए ₹25 है, तो शुक्रवार

को कुल कितनी राशि एकत्र की गई?

(A)Rs. 21270

- (B)Rs. 25375 (C)Rs. 24682
- $(D)D_{c} 27140$
- (D)Rs. 27140
- (E)None of these
- 2. The ratio of the number of 18 yr(male), 24 yr(male) & 30 yr(male) visitors on Tuesday is 1:3: a respectively, If the number of 30 yr(male) visited is 20 more than the number of 24 yr(male) visited, then the number of 30 yr(male) visited is what percent of the number of male visitors on Thursday?

मंगलवार को 18 वर्ष (पुरुष), 24 वर्ष (पुरुष) और 30 वर्ष (पुरुष) दर्शकों का अनुपात क्रमशः 1 : 3 : a है। यदि 30 वर्ष के पुरुष दर्शकों की संख्या, 24 वर्ष के पुरुष दर्शकों से 20 अधिक है, तो 30 वर्ष के पुरुष दर्शकों की संख्या, गुरुवार को पुरुष दर्शकों की कुल संख्या का कितने प्रतिशत है?

- (A)66.66%
- (B)22.22%
- (C)31.25%
- (D)36.36%
- (E)None of these
- 3. Which of the following option is correct? निम्नलिखित में से कौन सा विकल्प सही है?

I. 
$$y = 0.625x$$

II. 
$$2x - y = 40$$

III. 
$$x + 2y = 60$$

- (A) Only II
- (B) Only I
- (C) Only II and III
- (D) Only I and II
- (E) Only I and III
- 4. If the total number of visitors on Saturday is 5.88% more than the total number of visitors on Wednesday, then find the ratio between the total number of visitors on Friday and the total number of visitors on Saturday.

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यदि शनिवार को कुल दर्शकों की संख्या, बुधवार के कुल दर्शकों की संख्या से 5.88% अधिक है, तो शुक्रवार और शनिवार के कुल दर्शकों की संख्या का अनुपात ज्ञात करें।

(A)42:41

(B)37:38

(C)35:32

(D)31:76

(E)None of these

5. Find the difference between the number of female visitors on Wednesday and the number of female visitors on Friday?

बुधवार को महिला दर्शकों की संख्या और शुक्रवार को महिला दर्शकों की संख्या के बीच का अंतर ज्ञात करें।

(A)110

(B)125

(C)150

(D)200

(E)None of these

## **Solutions**

Its given that average number of male visitors on Tuesday, Wednesday & Thursday is  $600 \text{ so } 18x+15x+12x = 600\times3 \& 45x = 1800 \& \mathbf{x} = \mathbf{40}$  and number of number of female visitors on Friday is 6.25% less than number of male visitors on Friday (15/16 of 400 = 375) so  $15y = 375 \& \mathbf{y} = \mathbf{25}$ . So we get

	no of male visitors	no of female visitors	Total
Mon	900	410	1310
Tue	720	300	1020
Wed	600	250	850
Thu	480	200	680
Fri	400	375	775

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- 1. (B)Rs. 25375 {If on Friday, the ticket price for Male visitors is Rs. 40 and for female visitors is Rs. 25 so required answer =  $(40 \times 400) + (25 \times 375) = 16000 + 9375 = Rs. 25375$ }
- 2. (A)20.83% {ratio of the number of 18 yr(male), 24 yr(male) & 30 yr(male) visitors on Tuesday is 1:3: a respectively, If the number of 30 yr(male) visited is 20 more than the number of 24 yr(male) visited so ratio of 18 yr(male): 24 yr(male): 30 yr(male) = p:3p:3p+20 so p + 3p + 3p+20 = 720 and p = 100. Required answer = 320/480 \*100 = 66.66%}
- 3. (B)Only I { I. y = 0.625x so (25) = 0.625(40) }
- 4. (D)31:76
- 5. (B)125

# AASHISH ARORA

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

A certain number of people took part in two carnivals: Bubblegum bash and Parade Palooza in four different cities. In city D, 120 less number of people took part in Parade Palooza than in the city C. The number of people who took part in Parade Palooza in city B is 56.25% of the number of people who took part in Parade Palooza in city A and total number of people who took part in both carnivals in city B is 650 less than that of city A. The average of the number of people who took part in Bubblegum bash and number of people who took part in Parade Palooza in city A is 850. The number of people who took part in Bubblegum bash in city B is 150 more than the number of people who took part in Parade Palooza. The average of total number of people who took part in Bubblegum bash in all the cities is 630 and in city D, 120 less number of people took part in Bubblegum bash than in city B. The ratio of the number of people who took part in Bubblegum bash and number of people who took part in Parade Palooza in city C is 9:7.

कुछ लोगों ने चार अलग-अलग शहरों में आयोजित दो कार्निवल्स: बबलगम बैश और परेड पलूज़ा में भाग लिया। शहर D में, परेड पलूज़ा में भाग लेने वाले लोगों की संख्या शहर C की तुलना में 120 कम थी। शहर B में, परेड पलूज़ा में भाग लेने वाले लोगों की संख्या शहर A की तुलना में 56.25% है और शहर B में दोनों कार्निवल्स में भाग लेने वाले कुल लोगों की संख्या शहर A की तुलना में 650 कम है। शहर A में, बबलगम बैश और परेड पलूज़ा में भाग लेने वाले लोगों की औसत संख्या 850 है। शहर B में, बबलगम बैश में भाग लेने वाले लोगों की संख्या परेड पलूज़ा में भाग लेने वाले लोगों से 150 अधिक है। चारों शहरों में बबलगम बैश में भाग लेने वाले लोगों की औसत संख्या 630 है और शहर D में यह संख्या शहर B की तुलना में 120 कम है। शहर C में, बबलगम बैश और परेड पलूज़ा में भाग लेने वाले लोगों का अनुपात 9:7 है।

- 1. The number of people who took part in Bubblegum bash in city A is what percent of number of people who took part in Parade Palooza in city C? शहर A में बबलगम बैश में भाग लेने वाले लोगों की संख्या, शहर C में परेड पलूज़ा में भाग लेने वाले लोगों की संख्या का कितने प्रतिशत है?
  - (A)166.66%
  - (B)214.28%
  - (C)171.42%
  - (D)176.66%
  - (E)None of these

2. Find the ratio between number of people who took part in Parade Palooza in city B and number of people who took part in Parade Palooza in city D.

शहर B में परेड पलूज़ा में भाग लेने वाले लोगों और शहर D में परेड पलूज़ा में भाग लेने वाले लोगों के बीच अनुपात क्या है?

(A)8:7

(B)7:5

(C)4:7

(D)3:2

(E)None of these

3. Find the difference between number of people who took part in Bubblegum bash in city B & C together and number of people who took part in Parade Palooza in city C & D together.

शहर B और C में बबलगम बैश में भाग लेने वाले लोगों की कुल संख्या और शहर C और D में परेड पलूज़ा में भाग लेने वाले लोगों की कुल संख्या के बीच क्या अंतर है?

(A)320

(B)280

(C)240

(D)420

(E)None of these

4. Find the average number of people who took part in Parade Palooza in city B, C and D.

शहर B, C, और D में परेड पलूज़ा में भाग लेने वाले लोगों की औसत संख्या ज्ञात करें।

(A)640

(B)390

(C)350

(D)570

(E)None of these

5. The number of people who took part in Parade Palooza in city D is how much more or less than the number of people who took part in Bubblegum bash in city B?

शहर D में परेड पलूज़ा में भाग लेने वाले लोगों की संख्या, शहर B में बबलगम बैश में भाग लेने वाले लोगों की तुलना में कितनी अधिक या कम है?

- (A)200 less
- (B)180 more
- (C)300 less
- (D)180 more
- (E)None of these

# CHECKLIST

# Solutions

City	Bubblegum bash	Parade Palooza	Total
A	900	800	1700
В	600	450	1050
С	540	420	960
D	480	300	780

- 1. (B)214.28%
- 2. (D)3:2
- 3. (D)420
- 4. (B)390
- 5. (C)300 less

# CHECKLIS' BY AASHISH ARORA