

RRB NTPC

Previous Years' Questions Advanced Maths

Part II

Data Interpretation (DI)





1. **Direction:** Study the following table and answer the question based on it Table shows selling of cars by five producers for 2005 to 2010 (All figures are in thousand)

/						
Prod-	2005	2006	2007	2008	2009	2010
ucer						
L	440	480	470	500	520	510
М	400	410	415	415	420	430
N	380	390	390	400	420	495
0	360	380	400	415	440	500
Р	480	440	440	420	425	435

In given pairs, which pair has maximum selling of cars?

- (A) L, 2009
- (B) L, 2010
- (C) L, 2008
- (D) 0, 2008
- A. A
- B. D
- C. C
- D. B
- Ans. A
- Sol.

With the help of graph, we can see the maximum selling of cars by L in 2009. Which is 520.

- L, 2009 = 520.
- 2. In 2006. How much part of selling was of producer M domestic sale of cars?
- (A) 19.5%
- (B) 10.5%
- (C) 20.5%
- (D) 25.5%
- A. C
- B. A
- C. D
- D. B
- Ans. B
- Sol.

The number of cars sold in 2006 by all

= 480 + 410 + 390 + 380 + 440 = 2100

Cars sold by M in 2006 = 410

Required

$$=\frac{410}{2100} \times 100 = 19.5\%$$

3. Which of the following producer have maximum increment in selling with respect to previous year in 2010?

- (A) L
- (B) M
- (C) N
- (D) P
- A. D
- B. A
- C. B
- D. C
- Ans. D
- Sol. .

With the help of graph, we can see that the number of cars sold by company N is maximum than previous year.

In 2010 percentage increment than precious year -

% increment of M =
$$\frac{430 - 420}{420} \times 100 = 2.38\%$$

% increment of N =
$$\frac{495-420}{420} \times 100 = 17.85\%$$

% increment of
$$O = \frac{500 - 440}{440} \times 100 = 13.63\%$$

% increment of
$$O = \frac{500 - 440}{440} \times 100 = 13.63\%$$

% increment of $P = \frac{435 - 425}{425} \times 100 = 2.35\%$.

4. **Direction:** Given table shows the number of printed page, by the six different printers in different-different months.

Months	Printer P	Printer Q	Printer R	Printer S	Printer T	Printer U		
First	664	618	628	552	638	419		
Second	569	441	519	438	621	537		
Third	440	614	503	527	541	742		
Fourth	256	563	347	651	412	321		
Fifth	717	429	598	582	519	693		

What is average numbers of printed page in fourth month printed by all printers?

- (A) 415
- (B) 430
- (C) 425
- (D) 325
- A. (A)
- B. (C)
- C. (B)
- D. (D) Ans. B
- Sol.

Required

Avg.

$$=\frac{256+563+347+651+412+321}{256+563+347+651+412+321}$$



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$$= \frac{2550}{6}$$

$$= 425$$

- 5. Which printer has printed maximum number of pages in all months.
- (A) Printer S
- (B) Printer U
- (C) Printer P
- (D) Printer T
- A. (B)
- B. (C)
- C. (A)
- D. (D)
- Ans. C
- Sol.

The number of printed page by S is the maximum in all months.

Total no. of pages printed by P = 664 + 569 + 440 + 256 + 717 = 2646.

Total no. of pages printed by S = 552 + 438 + 527 + 651 + 582 = 2750Total no. of pages printed by T = 638 + 621 + 541 + 412 + 519 = 2731Total no. of pages printed by U = 2712

- 6. Find the ratio between printed page by printer Q in second month to printed page by printer U in fifth month.
- (A) 11:13
- (B) 7:11
- (C)9:11
- (D) 9:13
- A. (A)
- B. (B)
- C. (C)
- D. (D)
- Ans. B

Sol.

Required ratio = $\frac{441}{693}$

 $=\frac{21}{33}$

$$=\frac{7}{11}$$
.

7. **Direction:** Study the table and answer following questions. Cosmetic company Lo'real provides five different product. During 1995 and 2000 selling of five products is shown in bar graph.

No. of Packets (sold packets in Lakhs)

-akiisj						
Product	1995	2000				
Lipstick	20.15	48.17				
Nail Enamels	5.93	37.76				
Talcum powder	14.97	29.14				
Shampoo	7.88	12.21				
Conditioner	5.01	10.19				

During 1995-2000, which product's sale increament is minimum

- (A) Lo'real Shampoo
- (B) Lo'real Nail Enamels
- (C) Lo'real Talcum powder
- (D) Lo'real Lipstick
- A. (C)
- B. (B)
- C. (A)
- D. (D)
- Ans. C

Sol.

Increment in Lo'real Lipstick's sale =

$$\frac{48.17-20.15}{20.15} \times 100 = 139.05\%$$

Increment in Lo'real Nail Enamels' sale

$$\frac{37.76-5.93}{5.93} \times 100 = 536.76\%$$

Increment in Lo'real Talcum powder's sale

$$\frac{29.14-14.97}{14.97} \times 100 = 94.94\%$$

Increment in Lo'real Shampoo's sale = $\frac{12.21-7.88}{2} \times 100 = 54.94\%$

7.88
So, minimum increment was in shampoo's sale



- 8. Find the ratio of Lo'real Nail enamel in 2000 to Lo'real Talcum powder in 1995.
- (A) 7 : 2
- (B) 5 : 2
- (C) 4:3
- (D) 2:1
- A. (B)
- B. (D)
- C. (C)
- D. (A)
- Ans. A
- Sol.

 $\frac{\text{Lo'real Nail enamel in 2000}}{\text{Lo'real Talcum powder in 1995}} = \frac{37.76}{14.97} \approx \frac{5}{2}$

- 9. Which product's sale increment is approximate 55% during 1995 to 2000.
- (A) Lo'real Lipstick's
- (B) Lo'real Nail enamels
- (C) Lo'real Talcum powders
- (D) Lo'real Shampoos
- A. (C)
- B. (B)
- C. (A)
- D. (D)
- Ans. D

Sol.

Increment in Lo'real Lipstick's sale =

$$\frac{48.17 - 20.15}{20.15} \times 100 = 139.05\%$$

Increment in Lo'real Nail Enamels' sale

$$\frac{37.76-5.93}{5.92} \times 100 = 536.76\%$$

Increment in Lo'real Talcum powder's sale

=

$$\frac{29.14-14.97}{14.97} \times 100 = 94.94\%$$

Increment in Lo'real Shampoo's sale =

$$\frac{12.21-7.88}{7.88} \times 100 = 54.94\%$$

From the above solution Lo'real Shampoo's sale is approximate 55% during 1995 to 2000.

10. **Direction**: Study the following table and answer the questions based on it.

Following table gives the expenditures of a company (in lakh rupees) per annum over the given years.

			,				
Year	Item of Expenditure						
real	Salary	Fuel and	Transport	Bonus	Interest on loans	Taxes	
1998	288	98		3.00	23.4	83	
1999	342	112		2.52	32.5	108	
2000	324	101		3.84	41.6	74	
2001	336	133		3.68	36.4	88	
2002	420	142		3.96	49.4	98	

The ration between the total expenditure on taxes for all the years to the total bonus for all the years respectively is:

- (A) 9:40
- (B) 25:13
- (C) 451:17
- (D) 1:25
- A. (B)
- B. (A)
- C. (D)
- D. (C)
- Ans. D

Sol.

total expenditure on taxes for all the years = 83 + 108+74+88+98 = Rs. 451 lakhs

total bonus for all years = 3 + 2.52+3.84+3.68+3.96 = Rs. 17 Lakhs Required ratio = 451:17

- 11. Expenditure of fuel and transport forms what percentage of expenditure on salary for the year 2001?
- (A) 34.54%
- (B) 39,22%
- (C) 33.57%
- (D) 39.58%
- À. (B)
- B. (D)
- C. (C)
- D. (A)
- Ans. B

Sol.

Expenditure of fuel and transport in year 2001 = Rs. 133 lakhs

Expenditure on salary in year 2001 = Rs. 336 Lakhs

Required percentage = (133/336) x 100 = 39.58%

- 12. The total expenditure of the company over the items during the year 2001 is:
- (A) Rs. 590 lakh
- (B) Rs. 598 lakh
- (C) Rs. 597 lakh





(D) Rs. 597.08 lakh

A. (C)

B. (D)

C. (B)

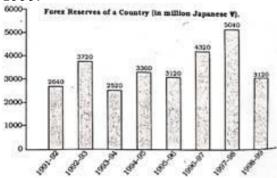
D. (A)

Ans. B

Sol.

Total expenditure of the company during year 2001 = 336+133+3.68+36.4+88 =Rs. 597.08 Lakhs

13. **Direction:** Study the following graph and answer the questions given below: The bar graph given below shows the Forex reserves of a country (in million Japanese Y) from 1991-1992 to 1998-1999.



For which year, the per cent increase of Forex reserves over the previous year, is the highest?

(A) 1992-1993

(B) 1993-1994

(C) 1994-1995

(D) 1996-1997

A. (A)

B. (D)

c. (c)

D. (B)

Ans. A

Sol.

The percent increase of Forex reserves in 1992-93 over $1991-92 = (3720-2640)/2640 \times 100$

 $= 1080/2640 \times 100$

= 40.90%

There is decrease in year 1993-94 over 1992-93.

The percent increase of Forex reserves in 1994-95 over $1993-94 = (3360-2520)/2520 \times 100$

 $= 840/2520 \times 100 = 33.33\%$

The percent increase of Forex reserves in 1996-97 over $1995-96 = (4320-3120)/3120 \times 100$

 $= 1200/3120 \times 100 = 38.46\%$

So, the percent increase of Forex reserves in 1992-93 over 1991-92 is highest.

14. The Forex reserves in 1996-1997 were approximately what per cent of the average Forex reserves over the period under review?

(A) 95%

(B) 110%

(C) 115%

(D) 125%

A. (A)

B. (B)

C. (D)

D. (C)

Ans. C

Sol.

the average Forex reserves over the period under review = (2640+3720+2520+3360+3120+4320+5040+3120)/ 8 = 3480

Percent of the Forex reserves in 1996-1997 over the average Forex reserves = $4320/3480 \times 100 = 124.13\% = approximate 125\%$

15. The Forex reserves in 1997-1998 was how many times that in 1994-1995?

(A) 0.7

(B) 1.2

(C) 1.4

(D) 1.5

A. (D)

B. (B)

C. (C)

D. (A)

Ans. A

Sol.

The Forex reserves in 1997-1998 = 5040The Forex reserves in 1994-1995 = 3360Ratio = 5040/3360 = 1.5

16. **Direction:** the following table represents the marks of four students in five subjects.



	Physics	Chemistry	Maths	History	Geography
Shyam	45	50	49	51	65
Sunil	60	55	60	59	61
Jagdish	35	41	39	30	45
Rajesh	50	55	51	57	62

Consider the information and answer questions based on it.

Who has the highest average marks?

- (A) Shyam
- (B) Sunil
- (C) Jagdish
- (D) Rajesh
- A. (B)
- B. (D)
- C. (C)
- D. (A)
- Ans. A
- Sol.

total marks of Shyam=40+50+49+51+65=255

Average marks of Shyam =255/5=51

total marks of

Sunil=60+55+60+59+61=295 average marks of Sunil=295/5=59

Total marks of

Jagdish=35+41+39+30+45=190

Average marks of Jagdish=190/5=38

Total marks of

Rajesh=50+55+51+57+62=275

Average marks of Rajesh=275/5=55 So, Sunil has highest average marks

4-14

- 17. Who has the highest marks in History and Geography put together?
- (A) Shyam
- (B) Sunil
- (C) Jagdish
- (D) Rajesh
- A. (D)
- B. (B)
- C. (C)
- D. (A)

Ans. B

Sol.

marks of Shyam in History and

Geography=51+65=116 marks of Sunil in History and

marks of Sunil in History and Geography=59+61=120

marks of Jagdish in History and

Geography=30+45=75 marks of Rajesh in History and Geography=57+62=119 So, Sunil has highest marks in History and Geography.

- 18. The difference between the total marks scored by Sunil and Jagdish is
- (A) 190
- (B) 125
- (C) 105
- (D) 115
- A. (D)
- B. (A)
- C. (B)
- D. (C)

Ans. Ď

Sol.

Total scored marks by Sunil =295 Total scored marks by Jagdish=190 Difference=295-190=105

19. Direction: Study the following table and answer the question based on it.

	Household Expenses (in Rs)						
Year	Rent	Grocery	Entertainment	EMI	Tax		
2010	32	12	5	3.4	9		
2011	37	13	6.5	4.5	13		
2012	46	14	7.3	5.6	17		
2013	48	16	7.9	6.4	18		
2014	52	18	8.5	7.4	19		

Calculate the yearly average expenditure on entertainment

- (A) Rs. 7,040
- (B) Rs. 6,500
- (C) Rs. 7,100
- (D) Rs. 7,400
- A. (B)
- B. (A)
- C. (D)
- D. (C)

Ans. É

Sol.

the yearly average expenditure on entertainment = (5 + 6.5 + 7.3 + 7.9 + 8.5)/5 = 35.2/5 = 7.04 thousand =Rs. 7040

20.In 2014 expenditure made on EMI is what percent of rent?

- (A) 11.34%
- (B) 14.23%
- (C) 13.22%
- (D) 15.55%
- A. (C)





- B. (B)
- C. (D)
- D. (A)

Ans. B

Sol.

In 2014 expenditure made on EMI of rent $= 7.4/52 \times 100 = 14.23 \%$

- 21. What is the total household expense for the year 2012
- (A) Rs. 89,900
- (B) Rs. 87,120
- (C) Rs. 89,100
- (D) Rs. 88,200
- A. (B)
- B. (C)
- C. (A)
- D. (D)
- Ans. C

Sol.

the total household expense for the year 2012 = 46 + 14 + 7.3 + 5.6 + 17 = 89.9 thousand =89,900 Rs

22. Instruction: Study the following table and answer the question based on it quarterly sales data is given in the table

Financial	Quarter	Sales
year		(in lakhs)
FY 12-13	Q1	25
FY 12-13	Q2	34
FY 12-13	Q3	24
FY 12-13	Q4	29
FY 13-14	Q1	36
FY 13-14	Q2	32
FY 13-14	Q3	39
FY 13-14	Q4	33
FY 14-15	Q1	45
FY 14-15	Q2	48
FY 14-15	Q3	44
FY 14-15	Q4	41

Increase in sales (in percent) of company from FY-(12-13) to FY-(13-14)

- (A) 20%
- (B) 22.5%
- (C) 25%
- (D) 27.5%
- A. (C)
- B. (A)
- C. (B)
- D. (D)
- Ans. A

Sol.

Total sales in the Financial year, FY 12-13(in lakh) = Sales in(Q1 +Q2 + Q3 + Q4)=25 + 34 + 24 + 29 = 112

- Total sales in the Financial year, FY 13-14(in lakh) = Sales in(Q1 +Q2 + Q3 + Q4)=36 + 32 + 39 + 33 = 140 Percentage Increase in sales = (140-112) $\times 100/112 = 25\%$
- 23. Average sales per quarter in FY (13-
- 14) for the company is
- (A) Rs 31 Lakh
- (B) Rs 32 Lakh
- (C) Rs 34 Lakh
- (D) Rs 35 Lakh
- A. (C)
- B. (B)
- C. (A)
- D. (D)
- Ans. D

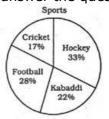
Sol.

Average sales per quarter in the Financial year, FY 13-14 = (36 + 32 + 39 + 33)/4 = 140/4 = 35 lakh per quarter

- 24. Total sales for the financial year (14-15)
- (A) Rs 168 Lakh
- (B) Rs 178 Lakh
- (C) Rs 188 Lakh
- (D) Rs 158 Lakh
- A. (A)
- B. (D)
- C. (B)
- D. (C) Ans. C
- Sol.

Total sales in the Financial year, FY 14-15(in lakhs) = Sales in(Q1 +Q2 + Q3 + Q4)=45 + 48 + 44 + 41 = 178 lakh

25. **Direction:** The following pie chart represents the sports played by students of a school. Consider the pie chart and answer the questions based on it.



The sector angle corresponding to Cricket is -

- (A) 118.8°
- (B) 100.8°





- (C) 79.2°
- (D) 61.2°
- A. (C)
- B. (D)
- C. (A)
- D. (B)
- Ans. É
- Sol.

In the pie chart, all the sports together are representing a circle of $360^{\circ}\,$

So, 100% of Sports = 360°

The percentage share of Cricket = 17% so, Angle formed by cricket = $360^{\circ} \times (17/100) = 61.2^{\circ}$

- 26. If there are 700 students in total, what is the difference between those who like Hockey and those who like Football?
- (A) 35
- (B) 77
- (C) 84
- (D) 112
- A. (A)
- B. (B)
- C. (D)
- D. (C)
- Ans. A
- Sol.
- 100% = 700
- 1% = 7

Differnce between number of students who like hockey and who like football = 33% - 28% = 5% = 5 * 7 = 35 students

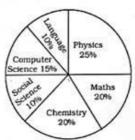
- 27. The ratio of students who like Kabaddi to Football is
- (A) $\frac{14}{11}$
- (B) 22
- (C) $\frac{11}{14}$
- (D) $\frac{17}{22}$
- A. (A)
- B. (D)
- C. (B)
- D. (C)
- Ans. D

Sol.

Ratio of students who like kabaddi to football = 22%/28% = 11/14

28. **Direction:** The pie chart represents the likes of students of a class. Consider the pie chart and answer questions based on it.

Subjects



If total number of students is 500, the ratio of students who like computer Science, Chemistry and Physics to that of the other remaining subjects is

- (A) $\frac{1}{2}$
- (B) $\frac{2}{3}$
- (C) 5
- 3 (D)
- A. (A)
- B. (D)
- C. (B)
- D. (C)
- Ans. D

Sol.

Total percentage of students of Computer Science, Chemistry and Physics = 15% + 20% + 25% = 60%

Total percentage of remaining students = 100 - 60 = 40%

Required ratio = 60/40 = 3:2

- 29. The sector angle corresponding to the subject Physics is
- (A) 36°
- (B) 54°
- (C) 72°
- (D) 90°
- A. (A)





- B. (C)
- C. (D)
- D. (B)

Ans. C

Sol.

The sector angle corresponding to the physics = (25/100)* 360 = 90°

- 30. If there are in all 80 students, how many of them do like Computer Science?
- (A) 8
- (B) 12
- (C) 16
- (D) 20
- A. (D)
- B. (B) C. (C)
- D. (A)
- Ans. B

Sol.

Total number of students = 80

Percentage of student who like computer science = 15%

Number of student who like computer science = 15/100 * 80 = 12 students

31. **Direction:** From the given table, find the answer of following questions -

The no. of the male candidate is half of the total candidates. There are only male candidate in acting.

Field	Punjab	West	Kerala	Total
		Bengal		
Singing	60	46	74	180
Dancing	90	74	120	284
Acting	40	20	36	96

What is the total of female no. candidates?

- (A) 186
- (B) 271
- (C) 232
- (D) 290
- A. (A)
- B. (B)
- C. (C)
- D. (D)

Ans. C

- Sol. No. of females in singing = 180/2 =
- No. of females in dancing = 284/2 = 142No. of females in acting = 0 (given)

Total = 232

- 32. In which state the number of male candidates are highest?
- (A) Punjab
- (B) West Bengal
- (C) Kerala
- (D) None of these
- A. (A)
- B. (D)
- C. (C)
- D. (B)

Ans. C

Sol. No. of males in Punjab = 60/2 + 90/2+40 = 115

No. of males in West Bengal = 46/2 + 74/2 + 20 = 80

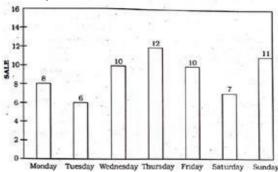
No. of males in Kerela = 74/2 + 120/2 +36 = 133

Therefore, Kerela has the highest no. of

- 33. What is the total no. of male candidates?
- (A) 328
- (B) 280
- (C) 364
- (D) 428
- A. (D)
- B. (A)
- C. (C)
- D. (B) Ans. B

Sol. Total no. of male candidates = 180/2+ 284/2 + 96(as all are men in acting) =

34. The number of bicycles sold by a shopkeeper is shown below. How many bicycles were sold from Thursday to Sunday?



- (A) 39
- (B) 38
- (C) 40
- (D) 36





- A. (D)
- B. (A)
- C. (C)
- D. (B)
- Ans. C

Sol.

- No of bicycle sold on Thursday=12
- No of bicycle sold on Sunday=11
- No of bicycle sold on Friday=10
- No of bicycle sold on saturday=7
- Total no of sold bicycles = 12+11+10+7=40
- 35. **Direction**: Read the data given below and answer the following questions:
- in a class of 60 students:
- 42 like Maths,
- 32 like English
- 12 like neither Maths nor English.
- How many students like both Maths and English?
- (A) 28
- (B) 26
- (C) 16
- (D) 12
- À. (B)
- B. (A)
- C. (C)
- D. (D)
- Ans. A
- Sol.
- Number of students who like Maths = 42 Number of students who like English = 32 Number of students who like neither Maths nor English = 12
- Total number of students who likes either Maths or English = 60 12 = 48
- Total number of students who likes Maths and English Both = 42 + 32 48 = 26
- 36. How many students like exactly one subject?
- (A) 16
- (B) 12
- (C) 6
- (D) 22
- A. (C)
- B. (D)
- C. (B)
- D. (A)
- Ans. B
- Sol.

- Number of students who like exactly one subject = Total number of students who likes either Maths or English Total number of students who likes Maths and English Both = 42 + 32 48 = 26
- = 48 26 = 22 37. Students who like only Maths form what percentage of the total number of students in the class?
- (A) 26.67%
- (B) 24.22%
- (C) 28.80%
- (D) 32.82%
- À. (D)
- B. (B)
- C. (C)
- D. (A)
- Ans. D

Sol.

Students who like only Maths = Students who like maths - Students who like Maths and English both

$$= 42 - 26 = 16$$

Required percentage = (16/60) x 100 = 26.66 %

38. **Direction:** The following table represents the sales (in million) of hour companies for five years. Consider the table the answer the questions based on it.

Company	1984	1985	1986	1987	1988
TO	350	400	300	350	350
НО	170	220	250	225	350
КО	230	210	250	270	300
YO	300	240	150	225	250

Which company's total sales in the first three years is lowest among others?

- (A) YO
- (B) HO
- (C) KO
- (D) TO
- A. (A)
- B. (C)
- C. (D)
- D. (B)
- Ans. D

Sol.

Total sales of different companies in first three years

TO= 350+400+300= 1050

HO= 170+220+250= 640

KO= 230+210+250= 690



YO= 300+240+150= 690

Clearly lowest sale is of company 'HO'

- 39. Which company shows a gradual increase in its sales from 1985 to 1988?
- (A) TO
- (B) HO
- (C) KO
- (D) YO
- A. (B)
- B. (C)
- C. (A)
- D. (D)
- Ans. B

Sol.

Gradual increase in sales from 1985 to 1988 is shown by company 'KO' (210,250,270,300)

- 40. What is the difference in the total sales of companies KO and HO in the last three years?
- (A) 200 million
- (B) 195million
- (C) 5million
- (D) No difference
- A. (A)
- B. (B)
- C. (C)
- D. (D)
- Ans. C

Sol.

Total sale of company 'KO' in last three years= 250+270+300=820 millions Total sales of company 'HO' in last three years= 250+225+350= 825 millions Difference in the total sales of company 'KO' & 'HO'= 825-820= 5millions

41. **Direction:** Consider the following information and answer the questions based on it.

In a group of 75 students, 12 like only cabbage, 15 like only cauliflower, 21 like carrot only, 12 students like carrot and cabbage both, 13 like only capsicum and 2 like both capsicum and cauliflower. What is the percentage of students that do not like cabbage?

- (A) 16
- (B) 32
- (C) 24
- (D) 68
- A. (C)
- B. (D) C. (B)
- D. (A) Ans. B

Sol.

Total number of students = 75

Number of students who like cabbage = 12 + 12 = 24

Number of students who don't like cabbage = 75 - 24 = 51

the percentage of students that do not like cabbage = $51/75 \times 100 = 68\%$

- 42. How many students like only one vegetables?
- (A) 60
- (B) 61
- (C) 65
- (D) 71
- A. (B)
- B. (C)
- C. (D)
- D. (A)

Ans. A

Sol.

Number of students who like only one vegetable = 12 + 15 + 21 + 13 = 61

- 43. The difference between the students who like carrot and cauliflower is
- (A) 6
- (B) 18
- (C) 16
- (D) 4
- A. (C)
- B. (D)
- C. (B)
- D. (A)

Ans. A

Sol.

Number of students who like carrot = 21+ 12 = 33

Number of students who like cauliflower = 15 + 2 = 17

Required difference= 33 - 17 = 16



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