Directions (1-5): The table given below gives the total number of newspaper readers in 5 towns. There are only three newspapers Hindu, Times of India(TOI), and Economic Times(ET) available in these towns. The table also contains the ratio of newspapers (Hindu to ET) and (TOI to ET). One reader reads only 1 newspaper. Answer the questions below on the basis of the information in the table.

Town	Total	Hindu : ET	TOI : ET
Ali Baag	8500	2 : 3	7 : 6
Bikaner	5100	1 : 3	3 : 2
Chikmagalur	13200	4 : 1	6 : 1
DD Nagar	6700	1 : 1	4 : 3
Ekta Nagar	7700	5 : 2	7 : 2

Q:1 The average of TOI readers in Chikmagalur and Ekta Nagar is _____.
1. 5525
2. 4775
3. 5125
4. 5855
5. 5340

Q:2 TOI readers in Bikaner are what percent of total readers of Bikaner? (approx.)
1. 52%
2. 52.5%
3. 53%
4. 55%
5. 51.6%

Q:3 Find the difference between ET readers in Bikaner and Hindu readers in Chikmagalur.
1. 3000
2. 2800
3. 3020
4. 2960
5. 3200

Q:4 Newspaper readers in Ali Baag and Bikaner combined are what percent more than ET readers of DD Nagar?
1. 518.54%
2. 595.64%
3. 608.4%
4. 576.61%
5. none of these

Q:5 Find the number of Hindu readers in Ekta Nagar.
1. 2950
2. 2900
3. 2880
4. 2750
5. 2550

Direction (6-10): Given below are details of the number of matches played, runs scored and wickets fallen of 5 teams in a league.

Team	No. of matches	Total runs scored	Total wicket fell
A	5	950	15
B	8	1400	20
C	10	1500	30
D	4	800	10
E	9	1200	25

Q:6 What is the ratio of the total number of matches played by all the 5 teams to the total number of wickets fell of all the 5 teams?
1. 9 : 25
2. 25 : 9
3. 9 : 28
4. 12 : 37
5. 25 : 37

Q:7 The total number of matches played in the league by all the 5 teams is what percent of the total runs scored by team D?
1. 20%
2. 16%
3. 12%
4. 6.5%
5. 4.5%

Q:8 If the total runs of teams A and C are increased by 20% and 30% respectively find the percentage change in the total runs of all the teams. (Find the approx. value)
1. 5%
2. 20%
3. 14%
4. 11%
5. 10%

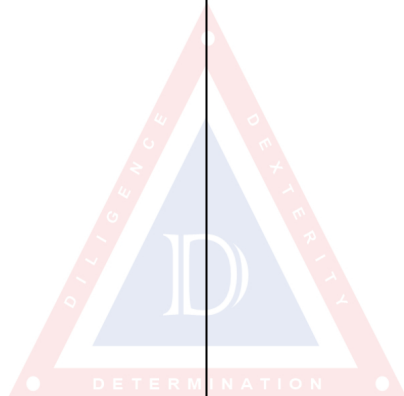**Q:9** What is the average of the total wicket fall in the league of all the 5 teams?

1. 10
2. 25
3. 20
4. 32
5. 17

Q:10 Total runs scored by team A alone is what percent of total runs scored by team D and team E Together?
1. 40%
2. 41%
3. 45%
4. 47.5%
5. 50%

Answer Key

1. (1)	**2.** (3)	**3.** (1)	**4.** (4)	**5.** (4)
6. (1)	**7.** (5)	**8.** (4)	**9.** (3)	**10.** (4)

Answers and Solutions

Q:1 The correct answer is **option 1** i.e. **5525.**
Total readers in Chikmagalur = 13200
The ratio of Hindu to ET readers = 4 : 1
The ratio of TOI to ET readers = 6 : 1
Final Ratio (Hindu : ET : TOI) = 4 : 1 : 6
TOI readers = (6/11) × 13200 = 7200
Total readers in Ekta Nagar = 7700
The ratio of Hindu to ET readers = 5 : 2
The ratio of TOI to ET readers = 7 : 2
Final ratio = 5 : 2 : 7
Readers of TOI in Ekta Nagar = (7/14) × 7700 = 3850
Average = (7200 + 3850)/2 = 5525

Q:2 The correct answer is **option 3** i.e. **53%**
In Bikaner:
Ratio of Hindu to ET readers = 1 : 3
Ratio of TOI to ET readers = 3 : 2
Combined Ratio of Hindu : ET : TOI
⇒ 1 × 2 : 3 × 2 : 3 × 3 = 2 : 6 : 9
Assume that total people in Bikaner = 2 + 6 + 9 = 17
Required percentage = (9/17) × 100 = 52.94 = 53%

Q:3 The correct answer is **option 1** i.e. **3000**
Total readers in Bikaner = 5100
Ratio of Hindu to ET readers = 1 : 3 = $x : 3x$
Ratio of TOI to ET readers = 3 : 2 = $3y : 2y$
$3x = 2y$
$y = (3/2)x$
Combined ratio (Hindu : ET : TOI) = $x : 3x : 3 × (3/2)x$ = 2 : 6 : 9
ET readers = (6/17) × 5100 = 1800
Total Readers in Chikmangalur = 13200
Ratio of Hindu to ET readers = 4 : 1 = $4x : x$
Ratio of TOI to ET readers = 6 : 1 = $6y : y$
$x = y$
Combined ratio (Hindu : ET : TOI) = 4 : 1 : 6
Hindu readers = (4/11) × 13200 = 4800
Required difference = 4800 - 1800 = 3000

Q:4 The correct answer is **option 4** i.e. **576.61%.**
Total Newspaper readers in Ali Baag and Bikaner = 8500 + 5100 = 13600
Newspaper readers in DD Nagar = 6700
Ratio of Hindu to ET readers = 1 : 1 = $x : x$
Ratio of TOI to ET readers = $4y : 3y$
$x = 3y$
Combined ratio (Hindu : ET : TOI) = $3y : 3y : 4y$ = 3 : 3 : 4
ET readers = [3/(3 + 3 + 4)] × 6700 = 2010
Difference = 13600 - 2010 = 11590
Required percentage = (11590/2010) × 100 = 576.61%

Q:5 The correct answer is **option 4** i.e. **2750.**
Total Newspaper readers in Ekta Nagar = 7700
Ratio of Hindu to ET readers = 5 : 2 = $5x : 2x$
Ratio of TOI to ET readers = 7 : 2 = $7y : 2y$
$2x = 2y$ or $x = y$
Combined Ratio (Hindu to ET to TOI) = 5 : 2 : 7
Hindu readers = [5/(5 + 2 + 7)] × 7700 = 2750

Q:6 The correct answer **option 1** i.e. **9 : 25**
Total number of matches played in the league by all the 5 teams = 5 + 8 + 10 + 4 + 9 = 36.
Total wickets fall of all the 5 teams = 15 + 20 + 30 + 10 + 25 = 100
Required Ratio = (total number of matches of all the 5 teams) : (total wickets fall of all the 5 teams)
= 36 : 100
= 9 : 25

Q:7 The correct answer is **option 5** i.e. **4.5%**
Let the percentage be x.
Total number of matches played by all the 5 teams = 5 + 8 + 10 + 4 + 9 = 36.
Total runs scored by team D = 800
Percentage = x = (36 × 100)/800 = 4.5%

Q:8 The correct answer is **option 4** i.e. **11%**
Total runs scored by team A = 950
increment of 20% = (20/100) × 950 = 190
So the new total runs of team A = 950 + 190 = 1140.
Total runs scored by team C = 1500
After increment of 30% = (30/100) × 1500 = 450
So, the new total runs of team C = 1500 + 450 = 1950.
The total runs scored by all the 5 teams = 950 + 1400 + 1500 + 800 + 1200 = 5850

The new total runs scored by all the 5 teams after the increment of 20% and 30% of team A's and team C's runs respectively = 1140 + 1400 + 1950 + 800 + 1200 = 6490

The difference between the new score and the old score = 6490 - 5850 = 640.

Percentage change = (640/5850) × 100 = 10.94 i.e. 11% approx.

Q:9 The correct answer is **option 3** i.e. **20**

The total wicket fell of all the 5 teams = 15 + 20 + 30 + 10 + 25 = 100

Average = Sum of observation/number of observations
⇒ 100/5 = 20

Q:10 The correct answer is **option 4** i.e. **47.5%**

Let the percentage be x

The total runs scored by team D and team E together = 800 + 1200 = 2000

Total runs scored by team A alone = 950

Required Percentage = x = (950 × 100)/2000 = 47.5%