



Date : 16th Dec 2023

Special Question – Quantitative Aptitude

English

**Directions 1 – 5 :** This set of information describes a football tournament between teams (D, E, and F). Each team played two matches. The scoring pattern of the tournament is as follows:

- A team gets 2 points for scoring a goal against the opponent team.
- A team gets 3 points for scoring a goal against the opponent team from outside the penalty box.
- There is a penalty of 1 point if a team concedes a goal.
- Only three players from each team scored the goals.

D – E Match: E is the winner of this match. Total points scored by E in this match is 4. Also, team D scored 2 goals and none of the players scored a goal from the outside area.

D – F Match: F scored 0 points in the match. Only one player from team D scored a goal from outside area. D scored 4 points in this match.

E – F Match: E gets 6 points from match. Team F scored 1 goal more than Team E. One player from team E scored a goal from outside area but none from team F.

**Q:1** In D – E match, find the points scored by team E are what percent of points scored by both teams by only scoring goals (without the deducted points).

1. 40%
2. 50%
3. 10%
5. 75%

**Q:2** In D – F match, find the total number of points scored by both teams by only scoring goals (without the deducted points).

1. 5
2. 7
3. 4
5. 6

**Q:3** In E – F match, the points scored by team E is what percent of the points scored by team F?

1. 75%
2. 50%
3. 33%
5. 80%

**Q:4** In E – F match, find the average of the points scored by both teams by only scoring

goals (without the deducted points).

1. 16
2. 12
3. 11
5. 14

**Q:5** In the matches between D – F and E – F, find the number of points obtained by team F by scoring goals from inside the box.

1. 16
2. 14
3. 2
5. 8

### Answer Key

1. (1) 2. (2) 3. (1) 4. (4) 5. (1)

### Answers and Solutions

**Q:1** The correct answer is **option 1** i.e. **2**

#### Calculations:

Points scored by team E = 4 points

Goals scored by team D = 2 (4 points)

Hence, points scored by team E without being penalised = 4 + 2 = 6 points

Hence, to score 6 points team E must have scored 3 inside the box goals as no player scored a goal from outside the box

We have the following table;

Team	Points scored	Inside the box goals	Outside the box goals	Points deducted (for conceding)	Points scored (without deducted points)
D	1	2	-	3	4
E	4	3		2	6

Required percent =  $4 / (4 + 6) \times 100 = 4/10 \times 100 = 40\%$

**Q:2** The correct answer is **option 2** i.e. **7**

#### Calculations:

Points scored by team D = 4

Points scored by team F = 0

We can create the following table;

Team	Points scored	Inside the box goals	Outside the box goals	Points deducted (for conceding)	Points scored (without deducted points)
D	4	1	1	1	5
F	0	1	-	2	2

Hence, the total number of points scored by both teams by only scoring goals (without the deducted points)

$\Rightarrow 5 + 2 = 7$

**Q:3** The correct answer is **option 1** i.e. **75%**

#### Calculations:

Total points scored by team E = 6 points

Number of goals scored by team E = x

Number of goals scored by team F = x + 1

Goal scored from outside the box = 1 (3 points)

Now, the number of goals scored from inside the box will be assumed such that;

Total points scored by team E = Points for Number of goals scored from outside the box + Points for goals scored from inside the box - (Penalty for conceding goals)

By hit and trial method, We take number of goals scored from inside the box = 5

$\Rightarrow 6 = 3 + (2 \times 5) - 7$

$\Rightarrow 6 = 6$

Hence, the number of goals scored from inside the box = 5

Total goals scored by team E = 6

Hence, total number of goals scored by team F = 7.

We have the following table;

Team	Points scored	Inside the box goals	Outside the box goals	Points deducted (for conceding)	Points scored (without deducted points)
E	6	5	1	7	13
F	8	7	-	6	14

Hence, points scored by team E = 6

Point scored by team F = 8

Required percentage =  $(6/8) \times 100 = 75\%$

**Q:4** The correct answer is **option 4** i.e. **13.5**

#### Calculations:

Total points scored by team E = 6 points

Number of goals scored by team E = x

Number of goals scored by team F = x + 1

Goal scored from outside the box = 1 (3 points)

Now, the number of goals scored from inside the box will be assumed such that;

Total points scored by team E = Points for Number of goals scored from outside the box + Points for goals scored from inside the box - (Penalty for conceding goals)

By hit and trial method, We take number of goals scored from inside the box = 5

$\Rightarrow 6 = 3 + (2 \times 5) - 7$

$$\Rightarrow 6 = 6$$

Hence, the number of goals scored from inside the box = 5

Total goals scored by team E = 6

Hence, total number of goals scored by team F = 7.

We have the following table;

Team	Points scored	Inside the box goals	Outside the box goals	Points deducted (for conceding)	Points scored (without deducted points)
E	6	5	1	7	13
F	8	7	-	6	14

Hence, points scored by both teams by only scoring goals (without the deducted points) =  $13 + 14 = 27$

Required average =  $27/2 = 13.5$

**Q:5** The correct answer is **option 1** i.e. **16**

**Calculations:**

In D - F match;

Points scored by team D = 4

Points scored by team F = 0

We can create the following table;

Team	Points scored	Inside the box goals	Outside the box goals	Points deducted (for conceding)	Points scored (without deducted points)
D	4	1	1	1	5
F	0	1	-	2	2

In E - F match;

Total points scored by team E = 6 points

Number of goals scored by team E = x

Number of goals scored by team F = x + 1

Goal scored from outside the box = 1 (3 points)

Now, the number of goals scored from inside the box will be assumed such that;

Total points scored by team E = Points for Number of goals scored from outside the box + Points for goals scored from inside the box - (Penalty for conceding goals)

By hit and trial method, We take number of goals scored from inside the box = 5

$$\Rightarrow 6 = 3 + (2 \times 5) - 7$$

$$\Rightarrow 6 = 6$$

Hence, the number of goals scored from inside the box = 5

Total goals scored by team E = 6

Hence, total number of goals scored by team F = 7.

We have the following table;

Team	Points scored	Inside the box goals	Outside the box goals	Points deducted (for conceding)	Points scored (without deducted points)
E	6	5	1	7	13
F	8	7	-	6	14

Hence total goals scored by team F from inside the box =  $7 + 1 = 8$

Points awarded for each inside the box goal = 2

Hence, number of points obtained by team F by scoring goals from inside the box in both matches =  $2 \times 8$

$$\Rightarrow 16$$