Directions (1-5): Read the following information carefully and answer the questions that follow.
There are five schools in a city 'Vidhi', 'Vidya', 'Vidit', 'Vidhan' and 'Vidushi'. Out of the total students in 'Vidhi', 15% are chess Grandmasters (GM). Out of the total GMs present in the school 'Vidhi', 75 speak French. In the school 'Vidya' 25% are GMs and of these GMs 40 people speak French. When it comes to the school 'Vidit', 22% of the total students are Grandmasters and out of these Grandmasters, 66 speaks French. 18% of the total students in the school 'Vidhan' are Grandmasters and out of these Grandmasters, 65 students speak French. When the data regarding students of the school 'Vidushi' was collected, it was found that, of the total students studying in the school 20% are Grandmasters and 70 of these GMs speak French.

1. Out of the total students in the school Vidhi, 40% speak French while of the students who are not Grandmasters, 40% speak French. Find the total no. of students in the school Vidhi.
(a) 1500   (b) 1000   (c) 1750   (d) 1250

2. In the school 'Vidhan' the ratio of French speaking GMs and non-French speaking GMs is 13:23. What is the total no. of students in the school?
(a) 1500   (b) 1000   (c) 1750   (d) 1250

3. In the school 'Vidit' the difference between GM and non-GM students is 280. What is the no. of Grandmasters who do not speak French?
(a) 42   (b) 43   (c) 44   (d) 45

4. In the school Vidya, total no. of French speakers are 160 and the no. of non-French speaking Grandmasters are 35 then, find that the no. of Non-French speaking GMs is what percent of the total Non-French speakers in the school?
(a) 20%   (b) 25%   (c) 30%   (d) 33.33%

5. In the school 'Vidushi' the no. of Non-GMs is 680. Find the no. of Non-French speaking GMs.
(a) 100   (b) 110   (c) 120   (d) 130

Answers & Explanations

1. Ans. d
Sol. Let the total students in the school Vidhi be 100x
Then, 40% of these people speak French = 40x
Also, out of the total, 15% are Grandmasters
So, non-grandmasters = 85x
Out of these 85x, 40% speak French.
So, 40% of 85x = 34x
Thus, total 40x speak French and 34x non grandmasters speak French.
So, 40x-34x = 6x
6x Grandmasters speak French
6x = 75
2x = 25
100x = 1250
Thus, total students = 100x = 1250
Hence, option (d) is correct.

2. Ans. b
Sol. In Vidhan, French speaking GMs = 65
Ratio of French speaking and non-French speaking GMs = 13:23
So, 13 units = 65
Thus, 23 units = 115
So, total GMs = 65+115 = 180
Total GMs in Vidhan = 18% of the total
So, 18% = 180
100% = 1000
Hence, option (b) is correct.

3. Ans. c
Sol. In the school Vidit
GM = 22%
Thus, non-GM = 100-22 = 78
Difference = 78-22 = 56%
56% = 280
100% = 500
Out of these 500, 22% are GMs = 110
Now, there are total 110 GMs out of which 66 speak French
Thus, the no. of Grandmasters who do not speak French = 110-66 = 44
Hence, option (c) is correct.

4. Ans. b
Sol. Total no. of Non-French speaking GMs = 35
French speaking GMs = 40
Total GMs = 75
In Vidya total GMs = 25% of the total
Thus, 25% = 75
So, total = 100% = 300
Out of these total 300, 160 are French speakers
Thus, Non-French speakers = 300-160 = 140
Required % = 35/140 = 1/4 = 25%
Hence, option (b) is correct.

5. Ans. a
Sol. In the school Vidushi, GMs = 20%
Non-GMs = 100-20 = 80%
Thus, 80% = 680
So, GMs = 20% = 170
Out of these 170 GMs, 70 are French speaking
Thus, the no. of Non-French speaking GMs = 170 – 70 = 100
Hence, option (a) is correct.