Quiz Date: 5th May 2020

Directions (1-5): The following table shows the total number of people of a city in different years and percentage of them who were shifted to other places due to natural disasters. Table also shows the ratio of male to female in shifted people.
Note: Some data are missing if required calculate it than proceed.

Years	Total population	Percentage of population who shifted to other places	Ratio of male to female in shifted people
2005	24500	–	3: 2
2006	–	40%	–
2007	–	36%	7: 5
2008	36400	45%	–
2009	–	–	2: 1

Q1. If in 2005 total 6400 females shifted to other places, then approximately what percent of people shifted to another place in 2005.
(a) 60%
(b) 55%
(c) 65%
(d) 75%
(e) 50%

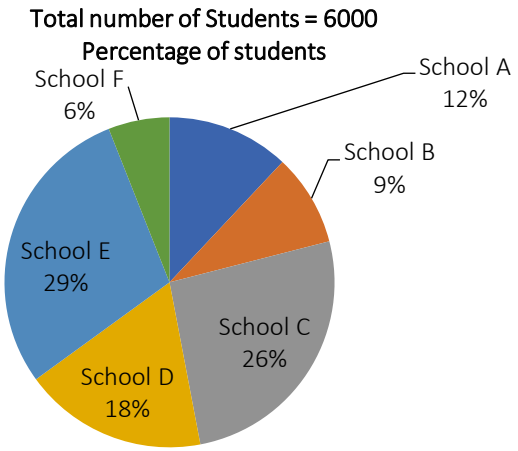
Q2. If no. of people who were shifted in 2006 is $66\frac{2}{3}\%$ more than the no. of males who were shifted in 2005 to other places. Find the total population of city in 2006. (no. of males shifted in 2005 = 9600)
(a) 35,000
(b) 30,000
(c) 40,000
(d) 45,000
(e) 50,000

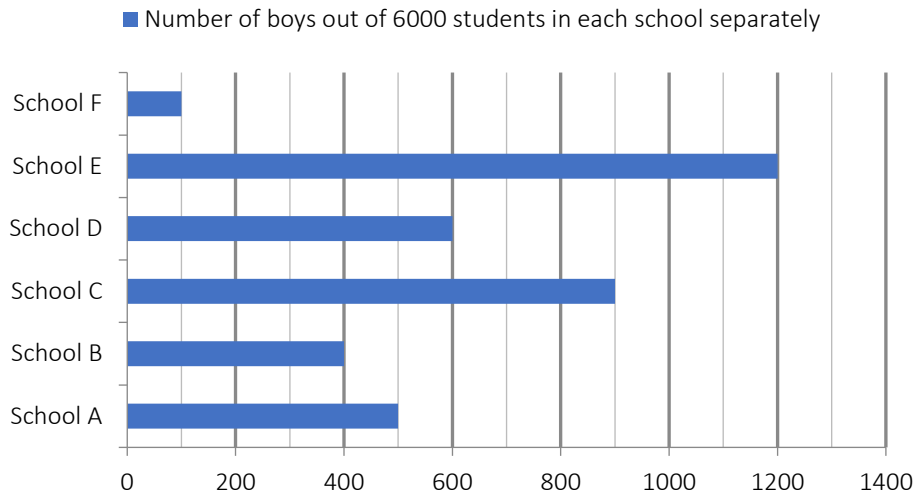
Q3. If difference between male and females who were shifted to other places in 2007 was 1440, then find the total population of the city in 2007.
(a) 24,000
(b) 26,000
(c) 28,800
(d) 22,000
(e) 20,400

Q4. If no. of males who were shifted to other places in 2008 was 200% more than that of females who shifted in the same year. Find the no. of such females who were shifted to other places in the year 2008.
(a) 3600
(b) 4095
(c) 4240
(d) 4190
(e) 12285

Q5. If no. of females who were shifted in 2009 is 100/3% of total no. of shifted population to other places in the same year then find the total no. of population of city in 2009. (total females who were shifted in 2009 is 4320).
(a) 44600
(b) 48000
(c) 45000
(d) Can't be determined
(e) None of these

Directions (6-10): **Study the following pie-chart and bar diagram and answer the following questions.**
The given pie chart shows the percentage-wise distribution of total students in six schools. Bar graph shows no. of boy students in each school.





Q6. What is the sum of the number of girls in School C, the number of girls in School E and the number of boys in School D together?
(a) 1,700
(b) 1,900
(c) 1,600
(d) 1,800
(e) 2,300

Q7. What is the ratio of the number of boys in School C and number of girls in School B together to total number of students in School E?
(a) 45 : 97
(b) 43 : 95
(c) 52 : 87
(d) 65 : 87
(e) 73 : 43

Q8. What is the difference between the total number of students in School F and the number of boys in School E?
(a) 820
(b) 860
(c) 880
(d) 840
(e) 260

Q9. In which of the following schools is the total number of students equal to the number of girls in School E?
(a) A
(b) B
(c) C
(d) D

(e) F

Q10. The number of girls in School A is approximately what percentage of the total number of students in School B?
(a) 55
(b) 50
(c) 35
(d) 45
(e) 40

Directions (11-15): The following bar graph indicates the population of three different villages in 5 years.

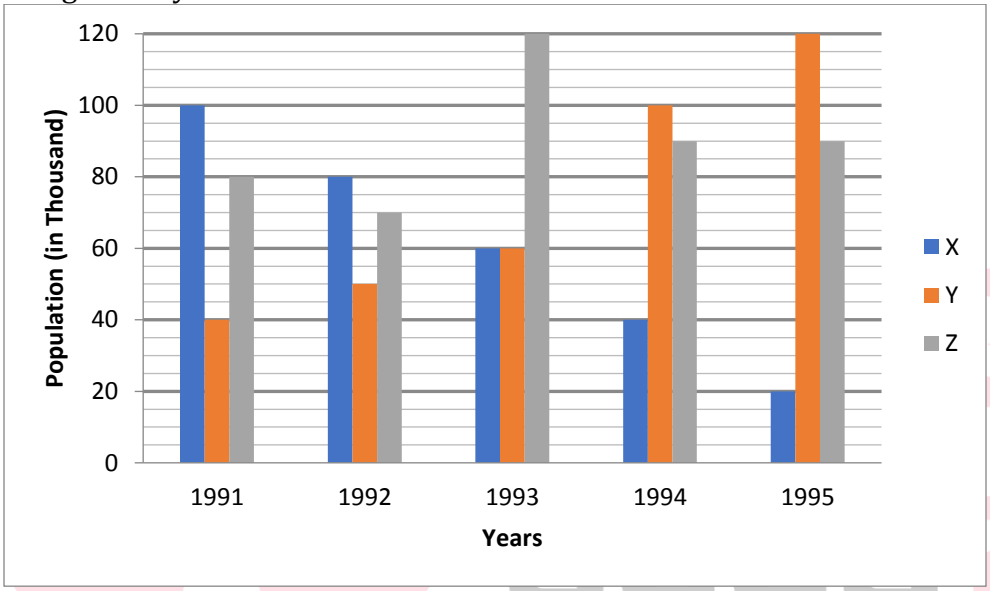


Table shows the ratio of male to female

years / Villages	1991	1992	1993	1994	1995
X	11 : 9	5 : 3	5 : 3	3 : 5	2 : 3
Y	3 : 5	2 : 3	8 : 7	3 : 7	1 : 1
Z	9 : 7	3 : 4	3 : 2	5 : 4	4 : 5

Q11. What is the ratio between no of males of village X & Y together in 1992 to the total population of village Z in 1995?
(a) 3 : 7
(b) 7 : 9
(c) 11 : 9
(d) 9 : 7
(e) 13: 15

Q12. Which of the following villages shows continuous decrease in their population over the years?

(a) Y
(b) Z
(c) X
(d) X & Y
(e) All of the above

Q13.Total number of males in village Z over the given years is approximately what percent of total number of females in villages X over the given years?
(a) 176 %
(b) 150 %
(c) 194 %
(d) 245 %
(e) 142 %

Q14. No of males from all villages in 1993 & 1994 is approximately what percent more or less than the no of females of village Y in same years?
(a) 135 % less
(b) 141 % less
(c) 135 % more
(d) 141 % more
(e) 165 % more

Q15. Find the difference between the average of females from villages X and average population of villages Z over the entire years?
(a) 63,100
(b) 82,500
(c) 65,600
(d) 70,000
(e) 46,300

Solutions

S1. Ans.(c)
Sol.

Total male population who shifted to other places in 2005 $= \frac{3}{2} \times 6400 = 9600$

$\therefore$ Total population shifted to other places in 2005 = 9600 + 6400 = 16000

Required percentage $= \frac{16000}{24500} \times 100$

$\simeq 65\%$

S2. Ans.(c)

Sol.

No. of people who were shifted in 2006

$= \left(1 + \frac{2}{3}\right) \times 9600 \qquad \left(\because 66\frac{2}{3}\% = \frac{2}{3}\right)$

= 16000

$\therefore$ Required answer $= \frac{16000}{40} \times 100$

= 40000

S3. Ans.(a)

Sol.

Let total males and total females who were shifted to other places in 2007 was 7x and 5x respectively.

$\therefore 7x - 5x = 1440$

$\Rightarrow x = 720$

Total population in 2007 $= \frac{720 \times 12}{36} \times 100$

= 24000

S4. Ans.(b)

Sol.

Ratio of male to female who were shifted in 2008

$= (200 + 100) : 100$

= 3: 1

$\therefore$ Required answer $= \frac{1}{4} \times \frac{45}{100} \times 36400$

= 4095

S5. Ans.(d)

Sol.

Total no. of people who were shifted in 2009 to other places =300/100×4320

= 12960

Here, we don't know the percentage of shifted no. of people. So, answer cannot be found.

S6. Ans.(d)

Sol.

Required No. of girls

$= \left(\frac{26}{100} \times 6{,}000 - 900\right) + 600 + \left(\frac{29}{100} \times 6{,}000 - 1{,}200\right)$

$= 3{,}900 - 2{,}100 = 1{,}800$

S7. Ans.(c)

Sol.

Required Ratio

$= \frac{900 + \frac{9}{100} \times 6{,}000 - 400}{29 \times \frac{6000}{100}} = 52 : 87$

S8. Ans.(d)

Sol. Required difference = 1200 – 360 = 840

S9. Ans.(b)

Sol.

No. of girls in School E = 1740 – 1200 = 540

Now

540 = Total no. of students in school B

S10. Ans.(e)

Sol.

Required $\% = \frac{720 - 500}{540} \times 100 \approx 40\%$

S11. Ans.(b)

Sol.

Males in village X in 1992 : $80 \times \frac{5}{8} = 50$ thousand

Males in village Y in 1992 : $50 \times \frac{2}{5} = 20$ thousand

Total population in Village Z in 1995 = 90 thousand

Required Ratio = $\frac{70}{90} = 7 : 9$

S12. Ans.(c)
Sol. It is clearly visible from the graph that Population in village X decline continuously and uniformly

S13. Ans.(a)
Sol.
No of males in village Z over the years
$= 80 \times \frac{9}{16} + 70 \times \frac{3}{7} + 120 \times \frac{3}{5} + \frac{5}{9} \times 90 + \frac{4}{9} \times 90$
$= 45 + 30 + 72 + 50 + 40 = 237$ thousand
No. of females in village X over the years
$= 100 \times \frac{9}{20} + 80 \times \frac{3}{8} + 60 \times \frac{3}{8} + \frac{5}{8} \times 40 + \frac{3}{5} \times 20$
$= 45 + 30 + 22.5 + 25 + 12 = 134.5$ thousand
$\therefore$ Required Ratio $= \frac{237000}{134500} \times 100 = 176\%$ Approx

S14. Ans.(d)
Sol.
No. of males in 1993
$= 60 \times \frac{5}{8} + 60 \times \frac{8}{15} + 120 \times \frac{3}{5} = 141.5$ thousand
No. of males in 1994
$= 40 \times \frac{3}{8} + 100 \times \frac{3}{10} + 90 \times \frac{5}{9} = 95$ thousand
Total males = 236.5 thousand
No. of females from Y in 1993 $= 60 \times \frac{7}{15} = 28$
No. of females from Y in 1994 $= 100 \times \frac{7}{10} = 70$
Total = 98
Difference = 236.5 – 98 = 138.5 thousand.
Required% $= \frac{138.5}{98} \times 100 = 141.3\%$ more

S15. Ans.(a)
Sol.
No. of females in village X over the years
$= 100 \times \frac{9}{20} + 80 \times \frac{3}{8} + 60 \times \frac{3}{8} + \frac{5}{8} \times 40 + \frac{3}{5} \times 20$
$= 45 + 30 + 22.5 + 25 + 12 = 134.5$ thousand

Average No. of female in X over the years
$= \frac{134500}{5} = 26{,}900$
Average population of village Z over the years
$= \frac{1}{5}[80 + 70 + 120 + 90 + 90]$
$= \frac{450{,}000}{5} = 90{,}000$
Required difference $= 90{,}000 - 26{,}900 = 63{,}100$