

# Banking Daily Quiz Blog - August 31



1. Read the instruction carefully and answer the questions based on it.

Table given below shows number of students (boy + girl) under one mentor, Percentage of girls out of total students and number of boys out of total students. Study the data carefully and answer the following questions.

INSTITUTE	NUMBER OF STUDENT UNDER ONE MENTOR (BOYS + GIRLS)	PERCENTAGE OF GIRLS OUT OF TOTAL STUDENTS	TOTAL NUMBER OF BOYS IN INSTITUTION
A	10	30	140
B	20	40	180
C	12	25	144
D	25	12	220
E	15	20	144

A. Total number of girls in institute D is how much less then total number of girls in institute 'C'?

A 24

B 20

C 22

**D 18**

E 16

## Solution

$$\text{Total number of girls in institute D} = \frac{220}{88} \times 12 = 30$$

$$\text{Total number of girls in institute C} = \frac{144}{75} \times 25 = 48$$

$$\text{Required difference} = 48 - 30 = 18$$

- B. Total number of girl in institute 'A' is what percent of the total number of students in institute 'B'?

**A** 20%

B 10%

C 26%

D 2%2

E 15%

## Solution

$$\text{Number of girls in institute A} = \frac{140}{70} \times 30 = 60$$

$$\text{Total number of students in institute B} = \frac{180}{60} \times 100 = 300$$

$$\text{Hence, required percentage will be} = \frac{60}{300} \times 100\% = 20\%$$

- C. Number of boys and number of girls in institute 'F' is 40% and 65% more than number of boys and number of girls in institute 'B'

respectively. Find the number of mentors required in institute 'F' if number of students under one mentor is '25' .

A 15

B 18

C 20

D 16

E None of these

### Solution

$$\text{No. of boys in institute 'F'} = \frac{140}{100} \times 180 = 252$$

$$\text{No. of girls in institute 'F'} = \frac{165}{100} \times \frac{180}{60} \times 40 = 198$$

$$\text{Total no. of students in institute F} = 252 + 198 = 450$$

$$\text{Number of mentors required in institute F} = \frac{450}{25} = 18$$

D. Find the average number of girls in institute A, C and E together?

A 45

**B**

48

C

42

D

44

E

36

**Solution**

Number of girls in A, C and E together

$$= \frac{140}{70} \times 30 + \frac{144}{75} \times 25 + \frac{144}{80} \times 20$$

$$= 60 + 48 + 36$$

$$= 144$$

$$\text{Required average} = \frac{144}{3} = 48$$

- E. **Total number of students in institute 'C' increases by 25% then how many more mentors required if number of students under one mentor will be same as before?**

A

2

**B**

4

C

6

D 8

E 10

### Solution

Total number of students in institute 'C' =  $\frac{144}{75} \times 100 = 192$

Number of mentors presently working =  $\frac{192}{12} = 16$

Number of mentors more required =  $\frac{192}{12} \times 1.25 - \frac{192}{12} = 4$

F. **Number of mentors in institute 'E' is what percent of the number of mentors in institute 'A'?**

A 45%

B 70%

C 65%

D 50%

**E**

60%

**Solution**

Total number of students in institute E =  $\frac{144}{80} \times 100 = 180$

Mentors in institute E =  $\frac{180}{15} = 12$

Total no. of students in institute A =  $\frac{140}{70} \times 100 = 200$

Mentors in institute A =  $\frac{200}{10} = 20$

Hence, required percentage will be =  $\frac{12}{20} \times 100\% = 60\%$

2. Sam noted his leaving time from office 5 pm as he decided to get his watch repaired on the way to his home. He travelled at 75% of his regular speed throughout his journey to home, barring the time he was at the repair shop. Time taken by Sam to reach the office is 30 minutes in regular days. What is the ratio of distance from shop to home, to the distance from his office to home, if he takes 20 minutes to reach the shop?

A 1:2

B 2:3

C 1:3

D 2:5

E None of these

### Solution

Time taken by 75% of the original speed =  $30 \times \frac{100}{75} = 40 \text{ minutes}$

Time taken to reach home from shop =  $40 - 20 = 20 \text{ minutes}$

Distance travelled in 20 minutes =  $20 \times \frac{75}{100} S = 15S$



Total distance between home and office =  $30S$

Distance between shop and home =  $30S - 15S = 15S$

Required ratio =  $15S : 30S = 1 : 2$

3. Present age of elder brother is thrice the younger brother's age. Seven years from now elder brother will be twice as old as younger brother. What is the present age of younger brother?

A 5

B 4

C 8

D 6

E 7

### Solution

Younger brother age =  $x$

Elder brother age =  $3x$

$$2(x + 7) = 3x + 7$$

$$2x + 14 = 3x + 7$$

$$x = 7$$

4. A train can travel 60% faster than a car. Both start from point A at the same time and reach point B, which is 480 km away from A at the same time. However the train lost 60 minutes while stopping at the station. What is the speed of the train?

A 296 Km/ Hr

B 208 Km/ Hr

C 248 Km/ Hr

D 268 Km/ Hr

**E 288 Km/ Hr**

### Solution

Speed of the car =  $x$

Speed of the train =  $x \times \frac{160}{100} = \frac{8x}{5}$

$$\left(\frac{480}{x}\right) - \left(\frac{480}{\frac{8x}{5}}\right) = 1$$

$$\left(\frac{3}{8x}\right) \times 480 = 1$$

$$180 = x$$

$$\text{Speed of the train} = 180 \times \frac{8}{5} = 288 \text{ km/hr}$$

5. A hemispherical bowl of internal diameter 54 cm contains a liquid. This liquid is to be filled in cylindrical bottles of radius 1cm and height 3 cm. How many bottles are required to empty the bowl?

A 4374

B 4272

C 4474

D 4072

E 3876

### Solution

$$\text{Volume of hemispherical bowl} = \frac{2}{3}\Pi r^3$$

$$\text{Radius} = 27 \text{ cm}$$

$$\text{Volume of hemisphere} = \frac{2}{3} \times \frac{22}{7} \times 27 \times 27 \times 27$$

$$\text{Volume of cylindrical bottle} = \frac{22}{7} \times 1 \times 1 \times 3$$

$$\text{Number of bottle required} = \frac{(\frac{2}{3} \times \frac{22}{7} \times 27 \times 27 \times 27)}{(\frac{22}{7} \times 1 \times 1 \times 3)}$$

$$= 4374$$

