DI Solutions

Worksheet - Easy (Level 1)

1.what was the total amount of faculty salaries at College R in 1970 ?

Solution:

Total amount of faculty salaries = Average Faculty salary x Total number of faculties.
= $ 14360 x 160
= $ 2297600

2.What was the Income from tuition gained by College R in 1980?

Solution:

Income from tuition = Tuition per student x Total number of student
= $ 3700 x 1790
= $6623000

3. What was the number of faculties in the year 1980?

Solution:

Number of Faculties = Total faculty salaries / Average faculty salary
= $ 4,629,200 / $ 28400
= 163

4.In which year, was the ratio of students to faculty is good?

Solution:

Ratio of students to faculty was good in year **1960** which is 9:1 as there are more no. of faculty are more in proportion to no of students.

5.What was the average salary received by a faculty in the year 1960?

Solution:

Average salary received by the faculty = Total faculty salaries / Total number of faculties
= $ 1,245,000 / 166
= $ 7500

Worksheet - Easy (Level 2)

1.The number of students enrolled in 1960 was approximately what fraction of the number enrolled in 1980?

Solution:

It means that

Fraction number x Number enrolled in 1980 = the no.of student enrolled in 1960

To find the fraction number, let us check with the options.

Option A: 8 / 9

(8 / 9) x 1790 = 1591 (approx)

Option B : 5 / 6

(5 / 6) x 1790 = 1491 (approx)

Option C: 2 / 3

(2 / 3) x 1790 = 1193 (approx)

Option D : 1 / 3

(1 / 3) x 1790 = 597 (approx)

Option E : 1 / 5

(1 / 5) x 1790 = 358 (approx)

Hence the answer is option B.

2. The increase in tuition per student from 1970 to 1980 was approximately how many times as great as the increase from 1960 to 1970?

Solution:

3 times

Worksheet – Easy (Level 3)

1.If the increase in the number of students enrolled from 1950 to 1960 was half the increase from 1960 to 1970, what was the student enrollment in 1950?

Solution:

The increase in no. of students enrolled from 1950-1960
= No. of students enrolled in 1960 – No. of students enrolled in 1950

= 1490 - X

The increase in no. of students enrolled from 1960-1970
= No. of students enrolled in 1970 – No. of students enrolled in 1960

= 1600 - 1490

Given that, = 110

Increase of students enrolled from 1950-1960 = (1 / 2) Increase of students enrolled from 1960-1970

$$1490 - X = (\tfrac{1}{2}) \times 110$$
$$= 55$$
$$X = 1435$$

Therefore, the total number of students enrolled in 1950 = 1435

2.If the total amount of faculty salaries in 1980 was paid from tuition income, approximately how much of each student's tuition was used to pay faculty salaries?

Solution:

Income from tuition = 6,623,000

Total amount of faculty salaries = 4,629,200.

Average of students income = Total amount of faculty salaries / Total number of students
= 4,629,200 / 1790
= 2,586 (approx)

Worksheet – Medium

1. How many more pure bred dogs are regd, with ASPCA in Rope county than in Green County?

Solution:

Option C .13,000

2.For Green county and Rope county combined approximately what percent of all dogs registered With ASPCA are mixed breed?

A. 22 B. 34 C. 44 D. 54 E. 60

Solution:

For both Green and Rope Country, the percent of mixed breed dogs is calculated as
(No. of dogs in Green + No. of dogs in Rope) x 100 / Total number of Dogs
= [(60/100) x 30000 + (50/100) x 50000] x 100 / 80000
= (18000 + 25000) x 100 /80000
= 43000000 / 800000
= 53.75 %

Approximated to 54 %
Hence option D is correct.

3.Which of the following statements can be inferred from the graphs?
I. More mixed bred dogs are regd with ASPCA in Green country than in Rope county
II More rare bred dogs are in green county than in Rope county.
III. In Rope county twice as many companion dogs are regd as toy dogs
Solution:

I. More mixed bred dogs are regd with ASPCA in Green county than in Rope county

Mixed breed in Green Country = (40 / 100) x 30,000 = 18,000

Mixed breed in Rope Country = 25,000

18,000 < 25,000
Therefore, I is False. Likewise II will also be false.
Only III is True.
Hence, option C (III only) is the correct answer.

4.How many more terrier are registered with ASPCA in Rope county than in Green county?
A. 2850 B. 3850 C.3000 D. 2400 E.6250

Solution:
20% of terrier of pure breed in Green Country = (20 / 100) x 12000
= 2400
25% of terrier of pure breed in Rope Country = (25 / 100) x 25000
= 6250
To find how many more in Rope Country.
So, 6250 – 2400 = 3850
Therefore, 3850 terrier dogs are more in rope Country..
Hence, option B is correct.

5.The toy dogs registered with ASPCA in Rope county are approximately how much percent more than that of those registered with ASPCA in Green county ?
A.28 B. 30 C.40 D.52. E.54

Solution:

Toy dogs in Rope Country(A) is how much percent more than Toy Dogs in Green Country(B)

If A is compared with B then, ((A – B) x 100) / B

A = Toy dogs in Rope Country = (10/100) x 25000 = 2500
B = Toy dogs in Green Country = (15 / 100) x 1800 = 1800

Here Toy dogs in Rope Country is compared with Toy dogs in Green Country.

Therefore, ((2500 – 1800) x 100) / 1800 = 700 / 18
= 38.89
40 is closest to 38.89.
Hence, option C is Correct.

Worksheet – Hard

1.What was the total number of students enrolled at College R in the fall of 1979?
Solution:

E 700

2.By what percent did the number of part-time students enrolled increase from the fall of 1979 to the fall of 1980 ?
A. 7% B. 42% C. 66 2/3% D. 75% E. 80%

Solution:

Part time students fall enrolled in 1979 = 200(A)
Part time students fall enrolled in 1980= 350(B)

It is asked, by what percent the part time enrollment in 1980 increase over the previous year(1979)?

Here B is compared with A

Then to find ((B – A) x 100)/ A

((350 – 200) x 100) / 200 = 75%
Hence option D is correct.

3.What was the increase, if any, in the number of full-time students enrolled at College R from the fall of 1976 to the fall of 1977?
Solution:

Option B 50

4.In the 1978-1979 school year, if 12% of the amount of contributions allocated to scholarships and operational expenses was allocated to heating costs, approximately how much was NOT allocated to heating costs?
A. $2,000 B. $25,000 C. $ 176,000 D.$205,000 E. $250,000

Solution:

Given, 12% of Scholarship and operational expenses = Heating Costs

(12 / 100) x 220,000 = 26,400

The question is to find

The amount Not alloted to heating cost = 220,000 – 26,400

= 193,600

$205,000 is closest to 193,600.

Hence, the option D is correct.

5.Approximately what was the total amount of contributions to College R from the year 1978-1979 school year through the 1980-1981 school year inclusive?

A. $967,000 B. $ 1,000,000 C. $ 9,000,000 D. $ 9,667,000 E. $10,000,000

Solution:

Amount of contribution during 1978-79 = 220,000(approx)

Amount of contribution during 1979-80 = 300,000(approx)

Amount of contribution during 1980-81 = 480,000(approx)

Therefore, the total amount of contribution = $1,000,000