LIC AAO Venn Diagram Questions PDF

Instructions

The given Venn diagram shows the categories of people who are Rock Stars, Pop Stars and Hip Stars. Study the diagram carefully and answer the questions that follow:
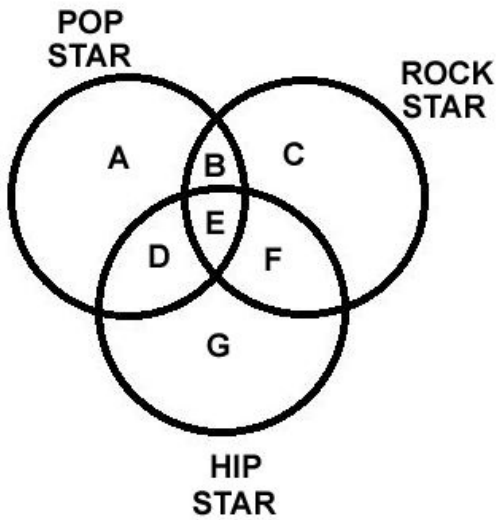
Question 1

What is the total number of Rock Stars in the diagram?

A   Only C

B   C + B

C   C+ B + F

D   C+ B + E + F

E   C+B+E+F+ D

   Answer: D

Explanation:
The circle on the top right is entirely Rock Stars. C is only Rock Stars. F is rockstars who are also Hip Stars. B is Rockstars who are also Pop Stars. E is all the three. So, (d) is the answer..

Question 2

Which area represents Rock Stars who are Pop Stars but not Hip Stars?

A   A

B   C

C   G

D   B

E   F

   Answer: D

Explanation:
The area of intersection of the two circles at the top is the area of interest. So, the answer is B.

Question 3

What does area A represent?

A   Rock Stars who are Pop Stars but not Hip Stars

B   Pop Stars who are neither Rock Stars nor Hip Stars

C   Rock Stars who are Hip Stars but not Pop Stars

D   Hip Stars who are Pop Stars but not Rock Stars

E   Rock Stars who are Pop Stars and Hip Stars

   Answer: B

Explanation:
Area A represents "only Popstars". So, they are neither Rock Stars nor Hip Stars.

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Question 4

What area represents the Hip Stars who are Rock Stars and Pop Stars?

A   A

B   B

C   C

D   D

E   E

   Answer: E

Explanation:
The area that represents all the three groups is the area of intersection of the 3 circles ie E.

Question 5

What does area F represent?

A   Rock Stars who are Pop Stars and Hip Stars

B   Pop Stars who are not Rock Stars and Hip Stars

C   Rock Stars who are Hip Stars but not Pop Stars

D   Hip Stars who are Pop Stars but not Rock Stars

E   Rock Stars who are Pop Stars but not Hip Stars

   Answer: C

Explanation:
F is the intersection of right circle and the bottom circle. So, it includes Rock Stars who are Hip Stars but not Pop Stars.

Instructions
For the following questions answer them individually

Question 6

At a certain school, each of the 160 students takes atleast one of the 3 classes. The 3 classes available are English, Hindi and Spanish. 54 students study English, 86 study Hindi and 61 study Spanish. If 8 students take all 3 classes, how many take exactly 2 classes?

A 22

B 25

C 31

D 27

E 23

Answer: B

Explanation:
Let us consider following diagram -
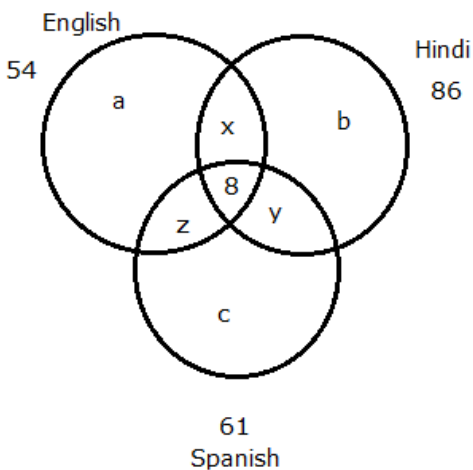
We know that
a+b+c+x+y+z+8 = 160

a+b+c+x+y+z = 152
Also, a+b+c+2*(x+y+z)+3*8 = 54+86+61
a+b+c+2*(x+y+z) = 177
Solving both equation we have, x+y+z = 177-152 = 25 students
So 25 students took exactly 2 subjects.
Hence, option B is the right answer.

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Question 7

In a locality consisting of 400 families, each family reads at least one newspaper. It is known that 200 families read 'The Hindu'. 150 families read 'Indian Express' and 180 families read 'Times of India'. If it is known that exactly 40 families read all three newspapers then how many families read exactly two newspapers?

A 80

B 50

C 70

D 90

E 60

Answer: B

Explanation:

Let there be 'a' people who read exactly one newspaper, 'b' people who read exactly '2' newspapers and 'c' people who read all three newspaper. So we have

a + b + c = 400

a + 2b + 3c = 150 + 180 + 200 = 530

Subtracting both the equations we get

b + 2c = 130

We have been given that c = 40

Hence, b = 130 - 80 = 50

Thus, 50 people read exactly two newspapers.

Instructions

There are 450 students in a college. Each student has to choose one or more elective out of management, history and physics. Further following information is also known -

1) 75 students selected only management and physics.

2) 84 students selected only management and history.

3) 52 students selected only physics and history.

4) The number of students who selected only history is 137 less the number of students who selected only management.

5) In total 238 students selected management as an elective.

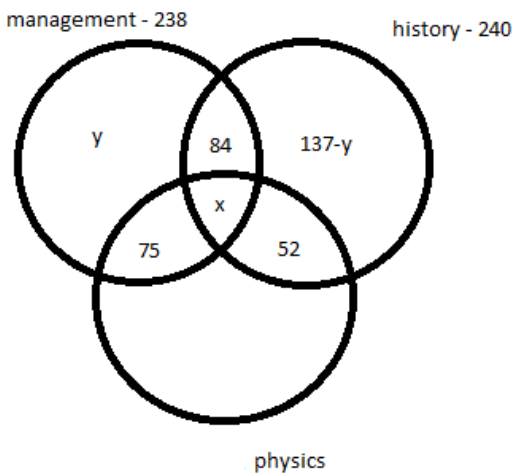6) In total 240 students selected history as an elective.

Question 8

How many students selected both management and physics as elective?

A 84

B 107

C 75

D 89

E 98

Answer: E

Explanation:

Let 'x' be the number of students who took all the three electives and 'y' be the number of students who took only management as an elective. We get following venn diagram -

Considering students who took management as an elective we have,

y + x + 84 + 75 = 238

x + y = 79

Considering students who took history as an elective we have,

137 - y + x + 84 + 52 = 240

y - x = 33

Adding both the equation we get,
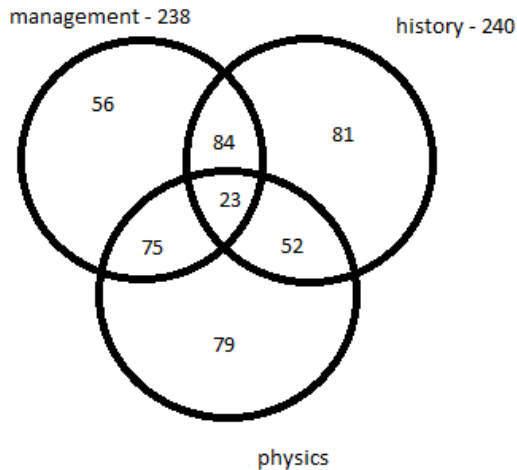
2y = 112

y = 56

So, x = 23

So, number of students who took all the three electives = 23

Number of students who took only management = 56

Number of students who took only history = 137 - 56 = 81

So, the number of students who took only physics = 450 - 240 - 56 - 75 = 79

Thus, we get following venn diagram -

Number of students who selected both management and physics as elective = 75 + 23 = 98
Hence, option E is the correct choice.
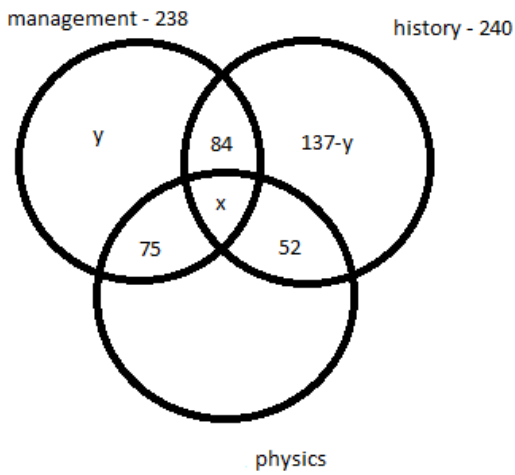
Question 9

How many students selected only management as an elective?

A 56

B 45

C 58

D 62

E 51

  Answer: A

Explanation:
Let 'x' be the number of students who took all the three electives and 'y' be the number of students who took only management as an elective. We get following venn diagram -

management - 238   history - 240

physics

Considering students who took management as an elective we have,

y + x + 84 + 75 = 238

x + y = 79

Considering students who took history as an elective we have,

137 - y + x + 84 + 52 = 240

y - x = 33

Adding both the equation we get,

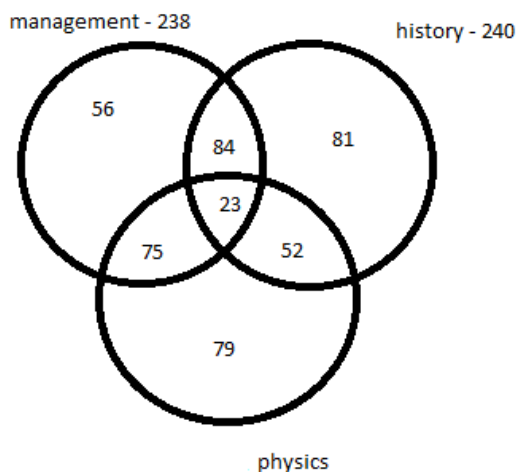2y = 112

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So, number of students who took all the three electives = 23

Number of students who took only management = 56

Number of students who took only history = 137 - 56 = 81

So, the number of students who took only physics = 450 - 240 - 56 - 75 = 79

Thus, we get following venn diagram -

management - 238   history - 240

physics

Hence, option A is the correct choice.

General Knowledge Questions & Answers (Download pdf)

Question 10

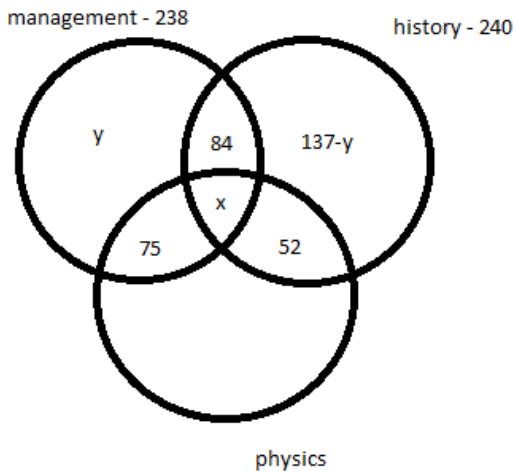**How many students selected the only history as an elective?**

A   78

B 91

C 81

D 93

E 80

Answer: C

Explanation:
Let 'x' be the number of students who took all the three electives and 'y' be the number of students who took only management as an elective. We get following venn diagram -

management - 238   history - 240

y   84   137-y

x

75   52

physics

Considering students who took management as an elective we have,

y + x + 84 + 75 = 238

x + y = 79

Considering students who took history as an elective we have,

137 - y + x + 84 + 52 = 240

y - x = 33

Adding both the equation we get,
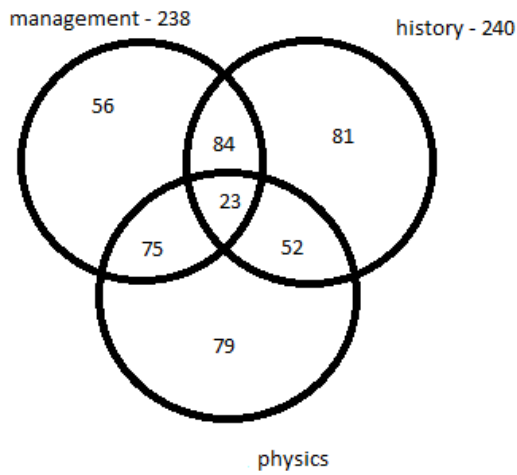
2y = 112

y = 56

So, x = 23

So, number of students who took all the three electives = 23

Number of students who took only management = 56

Number of students who took only history = 137 - 56 = 81

So, the number of students who took only physics = 450 - 240 - 56 - 75 = 79

Thus, we get following venn diagram -

management - 238   history - 240

56   84   81

23

75   52

79

physics

Hence, option C is the correct choice.

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