16.09.2020 FN 1 SESSION

1. Find the equation of the line with slope 2/3 and intercept on the y-axis is 5:

General form of equation of a line is y = mx + c

m 🡪 Slope = 2 / 3

x , y = (0 , 5)

y = mx + c

5 = (2 / 3 ) \* 0 + c

c = 5

y = (2x / 3) + 5

2. In a class of 80 students 25 passed in QA and DI, 25 passed in DI and English, 20 passed in QA and English. 10 students passed in

all the three subjects. If no student failed in all three subjects total no who passed in QA only, DI only and English only?

English, QA, DI 80

QA() DI()

A 15 B Failed in all 3 subjects

10

10 15

C

English(C +20+ 25 + 10)

QA & DI(25) = QA & DI , QA &DI & English

25 = QA & DI + 10

25 – 10 = QA & DI = 15

No of students who passed in atleast 1 subject = 80

A(Only QA) + B(Only DI) + C(Only Eng) + 15 + 15 + 10 +10 = 80

A(Only QA) + B(Only DI) + C(Only Eng) = 80 – (50) = 30

Students who passed in English = only English , English & QA, English & DI, English, QA ,DI

Students who passed only in English🡪 A

3. In our coaching institute there are total 170 students and they use different vehicles for transportation viz. bike, car and taxi.

a. The ratio of student using all three vehicles to students using at least 2 vehicles is 2:9.

The ratio of students using only one vehicle to students using at least 2 vehicles is 8:9.

b. Number of students using car only exceeds the number of students using bike allow by 14.

c. Number of students using taxi only exceed number of student using bike only by 12.

d. Number of students using taxi, bike and car is 90, 93, 97 respectively

Number of students using all the three vehicles is:

(90) T B(93)

a x b

k

z y

c

C(97)

a + b + c = V (no of students using 1 vehicle)

x + y + z = W (no of students using 2 vehicles)

k = U (no of students using 3 vehicles)

170 is atleast on vehicle

V + W + U =170

U : W+U = 2 : 9

V : W + U = 8 : 9

V = 8 parts

W + U = 9 parts

7 parts W

2 parts U

U : W = 2 : 7

V : W : U = 8 : 7 : 2

V = (8 / 17) \* 170 = 80

W = (7 / 17) \* 170 = 70

U = (2 / 17) \* 170 = 20

1. U = k = No of stucents doing all 3 vehicles = 20

2. No of sudents using no more than 1 vehicle = 80

3. No of stucents using exactly 2 vehicles = 70

4. No of students using bike and car but not taxi