Corbettmaths

Solve the simultaneous equations

$$\frac{1}{4}y = x$$

$$y = x^2 + 3$$

40 volunteers are asked to taste 3 different types of coffee, A, B and C.

13 liked coffee A
33 liked coffee B
17 liked coffee C
11 liked coffees A and B
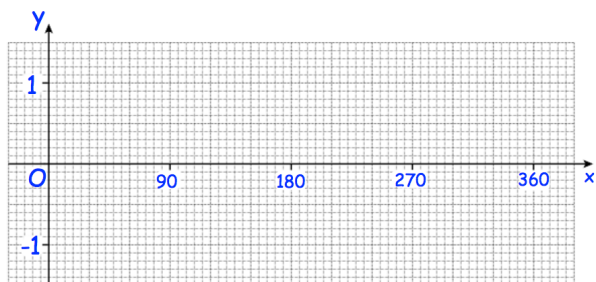13 liked coffees B and C
6 liked coffees A and C
5 liked all three types of coffee.

Draw a Venn diagram to show this information

A volunteer is chosen at random.

Find the probability that they liked at least two different types of coffee.

Sketch the graph of y = cos x for 0 ≤ x ≤ 360.

The sketch shows a curve with equation y = abˣ where a and b are positive constants.

The curve passes through the points (2, 90) and (4, 810)

Calculate the value of a and b