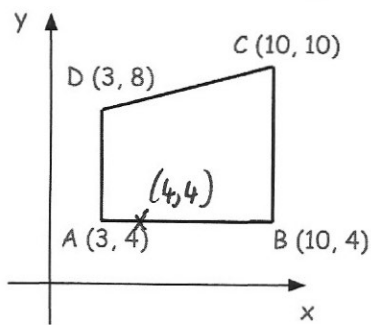


6th July

Higher Plus 5-a-day



Corbettmaths



ABCD is reflected in the line $y = x$
Write down the coordinates of any invariant points.

$(4, 4)$ & $(10, 10)$

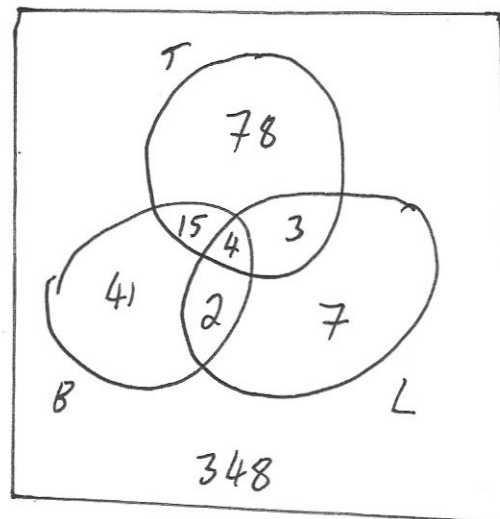
A garage checks 498 cars for faults with their tyres, brakes and lights.

100 cars had faults with their tyres.
62 cars had faults with their brakes.
16 cars had faults with their lights.

19 cars had faults with both their tyres and brakes.
7 cars had faults with both their tyres and lights.
6 cars had faults with both their brakes and lights.

4 had faults with all three.

Draw a Venn diagram to show this information.



A car that had only one type of fault is picked at random.

Find the probability that the car had a fault with its lights.

$$\frac{7}{41 + 7 + 78} = \frac{1}{18}$$

$$\frac{1}{18}$$

Solve the simultaneous equations

$$x^2 + 3x - xy = 10$$

$$2x - y = 4$$

$$y = 2x - 4$$

$$x^2 + 3x - x(2x - 4) = 10$$

$$x^2 + 3x - 2x^2 + 4x = 10$$

$$0 = x^2 - 7x + 10$$

$$0 = (x - 2)(x - 5)$$

$$x = 2 \text{ or } x = 5$$

$$y = 0 \quad y = 6$$

$$(2, 0) \quad (5, 6)$$