



Expand and simplify

$$(3 + \sqrt{2})(\sqrt{10} + \sqrt{3})$$

$$3\sqrt{10} + 3\sqrt{3} + \sqrt{20} + \sqrt{6}$$

$$3\sqrt{10} + 3\sqrt{3} + 2\sqrt{5} + \sqrt{6}$$

Given

$$f(x) = \frac{x+1}{3}$$

$$g(x) = 8x + 9$$

$$y = \frac{x+1}{3}$$

$$3y = x+1$$

$$3y - 1 = x$$

$$f^{-1}(x) = 3x - 1$$

Solve

$$f^{-1}(x) = g(x)$$

$$3x - 1 = 8x + 9$$

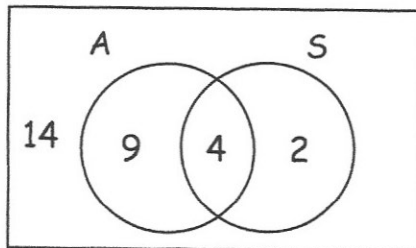
$$-10 = 5x$$

$$x = -2$$

The Venn diagram shows information about cars in a car park.

A = cars with alloys

S = cars with spoilers

 ξ 

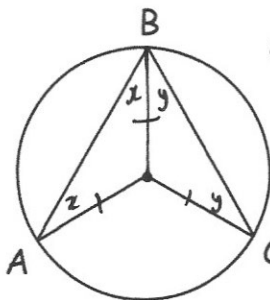
A car is chosen at random.

The car does not have a spoiler.
Find the probability that the car has alloys.

$$\frac{9}{23}$$

Find $P(A \cup S)'$

$$\frac{14}{29}$$



$$OA = OB = OC$$

$\therefore \triangle ABO$ and
 $\triangle OBC$ are
isosceles

$$\angle ABO = \angle BAO = x$$

$$\angle CBO = \angle BCO = y$$

Prove that the angle at the centre is
twice the angle at the circumference.

$$\angle BOA + \angle BOC + \angle AOC = 360 \text{ (angles at a point)}$$

$$\angle AOC = 2x + 2y$$

$$\angle AOC = 2 \times \angle ABC$$

$$\therefore \angle BOA = 180 - 2x$$

$$\angle BOC = 180 - 2y$$