

10th February



Corbettmaths

A large bottle of water is 14cm tall.
 A small bottle is 7cm tall.
 The bottles are mathematically similar.
 David claims the small bottle contains half the amount of water than the large bottle.

Show he is wrong.

Sides $\times 2$
 Volume $\times 2^3$ ($\times 8$)
 It contains $\frac{1}{8}$ of the amount.

Solve, giving your answers to one decimal place.

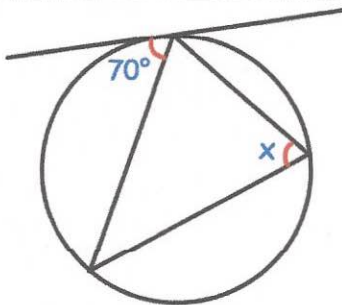
$2x^2 = 9x + 40$

$2x^2 - 9x - 40 = 0$

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

$x = \frac{9 \pm \sqrt{81 - (-320)}}{4}$

$x = 7.3$ or $x = -2.8$



Find x

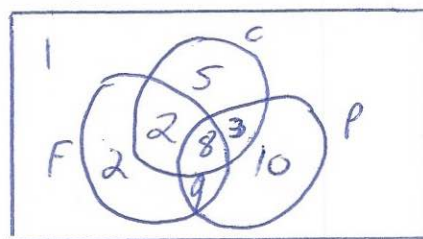
70°

Jenna asked 40 people which fizzy drink they liked from Coca-Cola, Pepsi and Fanta.

- 39 people liked at least one of the drinks
- 8 people liked all three drinks
- 3 people liked Pepsi and Coca-Cola but not Fanta.
- 29 people liked Fanta and Coca-Cola.
- 34 people liked Pepsi and Fanta.
- 18 people liked Coca-Cola.
- 2 people liked only Fanta.

Jenna picks one person at random from the 40 people.

Work out the probability that this person likes Pepsi.



Given that the person selected likes Pepsi, find the probability that this person likes both Fanta and Coca-Cola.

$\frac{8}{30} = \frac{4}{15}$