

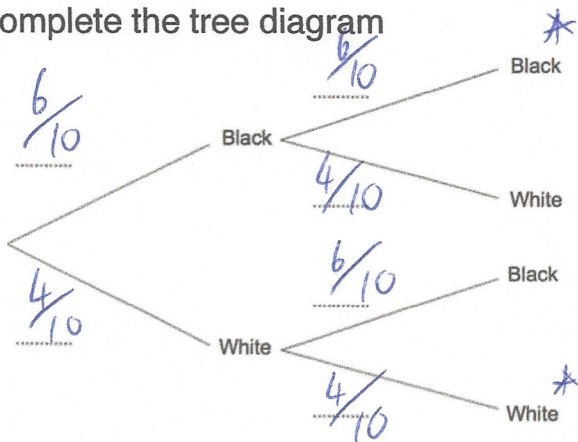
30th December



Corbettmaths

There are 10 socks in a bag.  
6 black and 4 white.  
A sock is taken at random, put back  
into the bag, then another is taken.

Complete the tree diagram



What is the probability of two black socks?

$$P(BB) \frac{6}{10} \times \frac{6}{10} = \frac{36}{100} = \frac{9}{25}$$

What is the probability of two socks of the same colour?

$$P(BB) \frac{6}{10} \times \frac{6}{10} = \frac{36}{100}$$

$$P(WW) \frac{4}{10} \times \frac{4}{10} = \frac{16}{100}$$

$$\frac{36}{100} + \frac{16}{100} = \frac{52}{100} = \frac{13}{25}$$

Factorise

$$x^2 + 2x - 15$$

$$(x+5)(x-3)$$

Factorise

$$x^2 - 8x - 9$$

$$(x-9)(x+1)$$

Patrick invested money into a special savers bank account.  
Each year money in the account earns 4% interest.

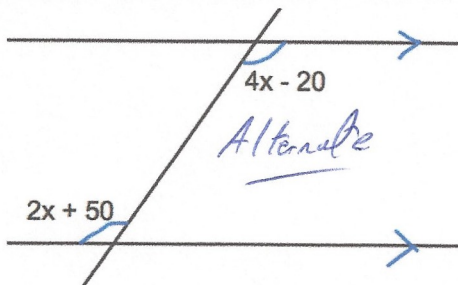
After one year, the total amount of money in the account was £291.20

How much did Patrick invest?

$$104\% = 291.20$$

$$1\% = 2.80$$

$$£ 280$$



Calculate the size of the angle,  $2x + 50$ .

$$4x - 20 = 2x + 50$$

$$2x = 70$$

$$x = 35$$

$$\underline{\underline{120^\circ}}$$