

**4** The weights of male leopards in a particular region are normally distributed with mean 55 kg and standard deviation 6 kg.

**(a)** Find the probability that a randomly chosen male leopard from this region weighs between 46 and 62 kg. [4]

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

The weights of female leopards in this region are normally distributed with mean 42 kg and standard deviation  $\sigma$  kg. It is known that 25% of female leopards in the region weigh less than 36 kg.

**(b)** Find the value of  $\sigma$ . [3]

.....

.....

.....

.....

.....

.....

.....

