

**16** A farm supplies apples to a supermarket.

The diameters of the apples,  $D$  centimetres, are normally distributed with mean 6.5 and standard deviation 0.73

**16 (a) (i)** Find  $P(D < 5.2)$  **[1 mark]**

**16 (a) (ii)** Find  $P(D > 7)$  **[1 mark]**

**16 (a) (iii)** The supermarket only accepts apples with diameters between 5 cm and 8 cm.  
Find the proportion of apples that the supermarket accepts. **[1 mark]**

**16 (b)** The farm also supplies plums to the supermarket.

These plums have diameters that are normally distributed.

It is found that 60% of these plums have a diameter less than 5.9 cm.

It is found that 20% of these plums have a diameter greater than 6.1 cm.

Find the mean and standard deviation of the diameter, in centimetres, of the plums supplied by the farm.

**[6 marks]**