

**28** A bag contains  $n$  beads.

There are 4 orange beads in the bag.

The rest of the beads are purple.

Donald is going to take at random 2 beads from the bag.

The probability that both beads will be the same colour is  $\frac{51}{91}$

Find the value of  $n$ .

Show clear algebraic working.

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 $n = \dots\dots\dots$ 

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(Total for Question 28 is 6 marks)

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Turn over for Question 29



P 6 6 0 2 1 R A 0 2 7 2 8