

12 (a) It is given that

$${}^{40}C_{18} = \frac{40!}{18!p!}$$

Write down the value of p

[1 mark]

12 (b) Use the result from part (a) to show that

$$\frac{{}^{40}C_{18}}{{}^{40}C_{17}} = \frac{23}{q}$$

where q is an integer to be found.

[2 marks]