Two friends A and B have equal number of daughters. There are three cinema tickets which are to be distributed among the daughters of A and B. The probability that all the tickets go to daughters of A is 1/20. The number of daughters each of them have is

A 4

B 3

C 6

D 1

Correct option is B)

Let A and B each have x daughters

$\therefore$ probability that all tickets go to all daughter of A $= \dfrac{{}^{x}C_3}{{}^{2x}C_3}$

$$= \frac{x(x-1)(x-2)}{2x(2x-1)(2x-2)} = \frac{1}{20}$$

$$\Rightarrow \frac{x-2}{4(2x-1)} = \frac{1}{20} \Rightarrow 20x - 40 = 8x - 4$$

$$\Rightarrow 12x = 36 \Rightarrow x = 3$$

Number of daughters each have= 3