20. There are 10 girls in a mixed class. If two pupils from the class are selected at random to represent the class on the School Council, then the probability that both are girls is 0.15. How many boys are in the class?

A 10 B 12 C 15 D 18 E 20

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20. **C** Let the number of boys in the class be x. Hence $\frac{10}{10+x} \times \frac{9}{9+x} = \frac{3}{20}$.
Simplifying gives $1800 = 3(10+x)(9+x)$ and then $x^2 + 19x - 510 = 0$.
Factorising gives $(x+34)(x-15) = 0$ and, since $x \neq -34$, $x = 15$.