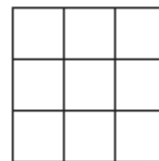




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- 2017 10** Three squares are chosen at random from the 3×3 grid below, and a cross is placed in each chosen square. What is the probability that all three crosses lie in the same row, column or diagonal?

**1**

- (A) $\frac{1}{28}$ (B) $\frac{2}{21}$
(C) $\frac{1}{3}$ (D) $\frac{8}{9}$

B

Total possible ways = 9C_3 .

As 3 rows, 3 columns and 2 diagonals, there are 8 possibilities.

$$P(\text{same row, column or diagonal}) = \frac{8}{{}^9C_3} = \frac{2}{21}.$$

State Mean:
0.63

* These solutions have been provided by [projectmaths](#) and are not supplied or endorsed by NESA.