

POTWI 15 PROBLEM

A positive integer n is chosen at random from 1 to 1000. What is the probability that

$$n(n+1)(n+2)$$

is divisible by 8?

- (A) $\frac{1}{4}$
- (B) $\frac{3}{8}$
- (C) $\frac{1}{2}$
- (D) $\frac{5}{8}$