

Solution to Q10.13.1.23

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Question: A girl calculates that the probability of her winning the first prize in a lottery is 0.08. If 6000 tickets are sold, how many tickets has she bought?

(A) 40 (B) 240 (C) 480 (D) 750

Solution:

parameter	value	description
Random Variable X	0	She didn't buy the ticket
	1	She bought the ticket
N	6000	Number of tickets sold

TABLE 0
INFORMATION TABLE

$$\Pr(X = 1) = 0.08 \quad (1)$$

$$\Rightarrow \frac{n(X = 1)}{N} = 0.08 \quad (2)$$

$$\Rightarrow n(X = 1) = 0.08 \times 6000 \quad (3)$$

$$n(X = 1) = 480 \quad (4)$$