

Answer on Question #75622 – Math – Statistics and Probability

Question

It costs a bakery \$6 to bake a cake. If it sells on the first day, the bakery charges \$15. If it sells on the second day, it charges \$9. Otherwise, the cake is thrown out. The chance that a cake will sell on the first day is 65% and the chance that it will sell on the second day is 23%. How much profit (or loss) will the bakery make on each cake?

Solution

x	$15 - 6 = 9$	$9 - 6 = 3$	$0 - 6 = -6$
$P(x)$	0.65	0.23	0.12

$$E(X) = \sum p_i x_i = 0.65 * 9 + 0.23 * 3 + 0.12(-6) = \$5.82.$$

Answer: \$5.82.