

MAT-120 – HW #11– Answers

Please select the correct answer number of each question. There are more answers than questions.
Answers may be repeated.

1) $E = \sum X \cdot P(X) = \-0.0707

Since the expected loss is 7.07¢ for a \$5 bet, the expected (or long run) loss is $7.07/5 = 1.41¢$ for each \$1 a person bets.

2)

A person playing the game a lot of times, will lose, on average, 50 cents per game.

3) $E = \sum X \cdot P(X) = -0.2212$

4) $E = \sum X \cdot P(X) = 0.012$

5)

Profit (\$)	Probability
8	1/6
-2	5/6

6)

Outcome	Profit (in \$)	Probability	XP(X)
1	1	1/6	1/6
2	-2	1/6	-2/6
3	3	1/6	3/6
4	-4	1/6	-4/6
5	5	1/6	5/6
6	-6	1/6	6/6

7)

\$3.

8)

$$E(X) = \sum X P(X) = -1/2 = -0.50$$

9)

-\$0.33 expected loss of 33 cents per game

10)

\$131.00

11)

Lose \$33

12) Lose \$44

13)

- \$50 (Lose \$50)