

Interpret expected value in context

1What is $P(X = 2)$?Find $P(X = 2)$ from the table.

X	$P(X)$
0	0.40
1	0.10
2	0.10
3	0.10
4	0.20
5	0.10

- A 0.20 B 0.90 C 0.40 D 0.10

2What is the expected value $E(X)$?Find the expected value $E(X)$.

X	$P(X)$
0	0.30
1	0.50
2	0.20

- A 1.9 B 0.9 C 1 D 3

3Which expression correctly calculates the expected value $E(X)$?

How would you calculate the expected value?

X	$P(X)$
2	0.10
3	0.20
4	0.50
5	0.20

- A $0.10 + 0.20 + 0.50 + 0.20$ B $2(0.10) + 3(0.20) + 4(0.50) + 5(0.20)$
C $2 + 0.10 + 3 + 0.20 + 4 + 0.50 + 5 + 0.20$ D $2(1.10) + 3(1.20) + 4(1.50) + 5(1.20)$

4

What ticket price would make this a fair game?

A fair ticket price equals the expected prize. Find it.

Prize	$P(X)$
\$10	0.30
\$15	0.50
\$25	0.20

- A \$15.5 B \$15 C \$10 D \$25

5

Is this a fair game?

A ticket costs \$15.5. A game is fair when the ticket price equals the

Prize	$P(X)$
\$0	0.30
\$5	0.10
\$25	0.60

- A Yes, the game is fair B No, the game is not fair

6

What is the expected gain or loss per ticket?

A ticket costs \$12. Find the expected gain or loss.

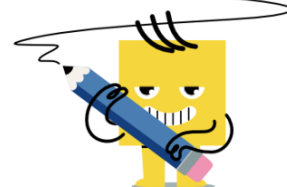
Prize	$P(X)$
\$10	0.10
\$20	0.40
\$25	0.50

- A -\$9.5 B \$21.5 C \$10.5 D \$9.5

7What is the expected value $E(X)$?Find the expected value $E(X)$.

X	$P(X)$
2	0.30
3	0.20
4	0.50

- A 9 B 3.2 C 4.2 D 3



Interpret expected value in context

8

What ticket price would make this a fair game?

A fair ticket price equals the expected prize. Find it.

Prize	$P(X)$
\$5	0.60
\$15	0.10
\$25	0.30

- A \$11.5 B \$5 C \$25 D \$12

9

Is this a fair game?

A ticket costs \$9. A game is fair when the ticket price equals the exp

Prize	$P(X)$
\$0	0.20
\$5	0.30
\$15	0.50

- A No, the game is not fair B Yes, the game is fair

10

What is the expected gain or loss per ticket?

A ticket costs \$15. Find the expected gain or loss.

Prize	$P(X)$
\$5	0.10
\$10	0.30
\$15	0.60

- A \$2.5 B -\$1.5 C -\$2.5 D \$12.5

11What is the expected value $E(X)$?Find the expected value $E(X)$.

X	$P(X)$
2	0.30
3	0.10
4	0.60

- A 9 B 3.3 C 3 D 4.3

12

What ticket price would make this a fair game?

A fair ticket price equals the expected prize. Find it.

Prize	$P(X)$
\$0	0.80
\$10	0.10
\$15	0.10

- A \$15 B \$0 C \$2.5 D \$2