



Warm Up

Expected Value

1. A student took five courses in the Fall semester. The courses and their credit hours are listed below. What is the student's grade point average (GPA) for the semester?

Course	Credit Hours	Grade
Statistics	3	A
Calculus	4	B
Biology	4	B
Literature	3	B
History	3	C

(Recall: A = 4 points, B = 3 points, C = 2 points, D = 1 point, F = 0 points)

2. A company is selling a one-year warranty on a car. The possible payouts with their probabilities and likely costs are listed below.

Event	Probability	Cost
Car needs no repairs (covered by the warranty) within 1 st year.	0.935	\$0
Car needs minor repairs within 1 st year.	0.05	\$300
Car needs major repairs within 1 st year.	0.01	\$1500
Warranty-covered problems are so bad that car needs to be replaced.	0.005	\$30,000

- a. What is the expected payout amount for the warranty?
 - b. If the company wants to profit \$50 per warranty, at what price should they sell the warranty?
3. Discuss how the previous two problems are similar, and how they are different.

MAIN IDEAS: List the Main Ideas for Today's Lesson
