

1. Find the expected value:

150	250	400
.2	.3	.5

2. Find the expected value:

400	-800
$\frac{4}{7}$	$\frac{3}{7}$

3. A \$20 bill, two \$10 bills, three \$5 bills and four \$1 bills are placed in a bag. If a bill is chosen at random, what is the expected value for the amount chosen?
4. You plan to invest in a certain project. There is a 35% chance that you will lose \$30,000, a 40% chance that you will break even, and a 25% chance that you will make \$55,000. What is the expected value in this problem, and what does it mean in terms of your investment?

5. At Tucson Raceway Park, your horse, Stick-in-the-mud has a probability of 0.05 of coming in first place, a probability of 0.1 of coming in second, and a probability of 0.25 of coming in third. First place wins \$4500, second place \$3500, and third place \$1500. It costs you \$1000 to enter the race. What is the expected value of the race to you? Is it worthwhile for you to enter the race? Explain.
6. A student plays the following game. He tossed three coins. If he gets exactly two heads he wins \$5. If he gets exactly one head he wins \$3. Otherwise, he loses \$2. On the average, how much should he win or lose per play of the game?