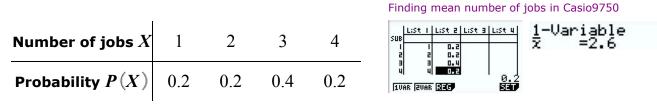Job Bids A landscape contractor bids on jobs where he can make $3000 profit. The probabilities of getting $1, 2, 3,$ or 4 jobs per month are shown.

Finding mean number of jobs in Casio9750

Number of jobs X	1	2	3	4
Probability $P(X)$	0.2	0.2	0.4	0.2

Answer: Find the mean number of jobs and multiply by the profit per job ($3000)
Mean = sum(X times P(x)) = 1(0.2) +2(0.2) + 3(0.4) + 4(0.2) = 2.6
Expected profit = 2.6 (3000) = $ 7, 800

Find the contractor's expected profit per month.

> Find the contractor's expected profit per month.
>
> The contractor's expected profit per month is $ $ 7,800 .

Lottery Prizes A lottery offers one $800 prize, one $600 Prize, three $400 prizes, and four $100 prizes. One thousand tickets are sold at $7 each. Find the expectation if a person buys two tickets. Assume that the player's ticket is replaced after each draw and that the same ticket can win more than one prize.

> The expectation if a person buys two tickets is _____ dollar(s).

1. Subtract cost of playing ($7) from each prize: 800-7 = 793; 600 - 7 = 593; 400 - 7 = 393; 100 - 7 = 93
2. Since 1000 tickets are sold, and replaced after each draw, the prob of wining is 1/1000 or 0.001
3. Since there are 9 prizes, in the probability of winning is 9/1000 and the probability losing 991/1000:
   (if you may win 9 out of 1000 times, in all other instances you lose, for a total of 1000/1000 = 1)

This is the table:

```
 X   | P(x)
793  | 1/1000
593  | 1/1000
393  | 1/1000
393  | 1/1000
393  | 1/1000
 93  | 1/1000
 93  | 1/1000
 93  | 1/1000
 93  | 1/1000
 -7  | 991/1000
```


Mean = sum(X times P(x)) = -4

As an average the player loses -4, in two tickets, 2 (-4) = -8.00