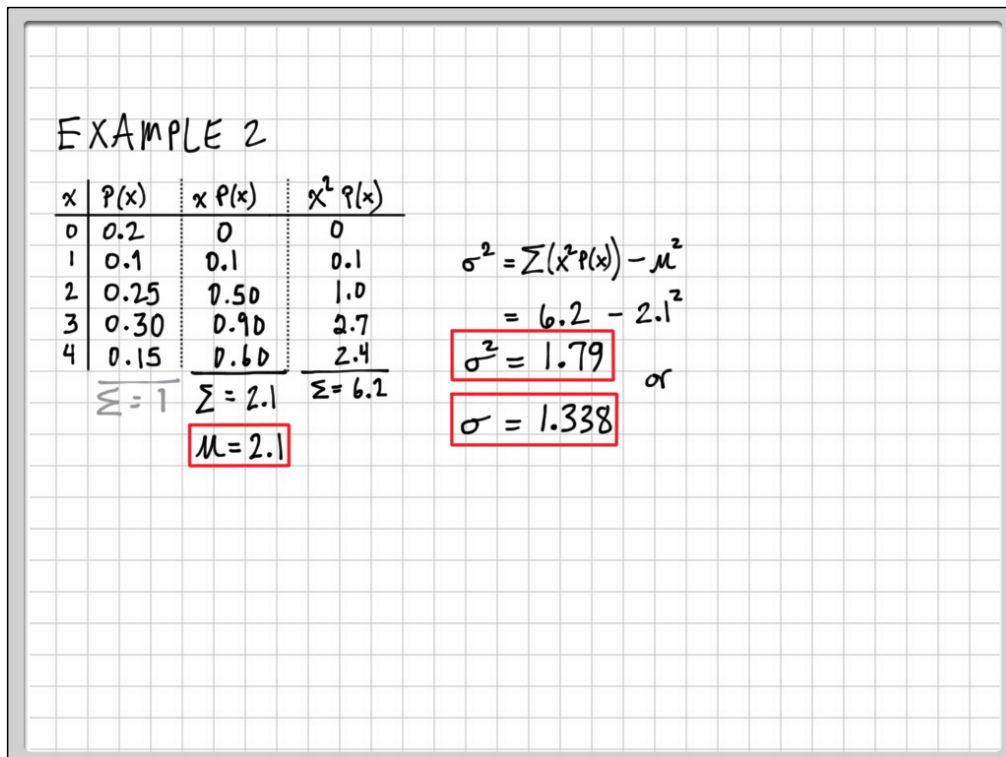


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NUMBER OF TAILS IN TEN TOSSES OF A COIN

$$\mu = 5 \quad \sigma = 1.57$$

unusual would be $\pm 2\sigma$ from the mean.

$$\begin{aligned} \mu \pm 2\sigma &= 5 \pm 2(1.57) \\ &= (1.86, 8.14) \end{aligned}$$

$$S = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$$

↑
↑

So, unusual outcomes are $X = 0, 1, 9, 10$

But since $P(2) \neq P(8)$ are less than 5% those are also unlikely.

1,000 Flips of a coin

$x = 502$ is a very typical value since it's very close to 500 \Rightarrow usual

But $P(502) = 0.025 \Rightarrow$ unlikely $P(X \geq 502) = 0.46$ both usual \neq likely.

$P(530) = 0.004$ and $P(X \geq 530) = 0.03$ both unusual \neq unlikely.