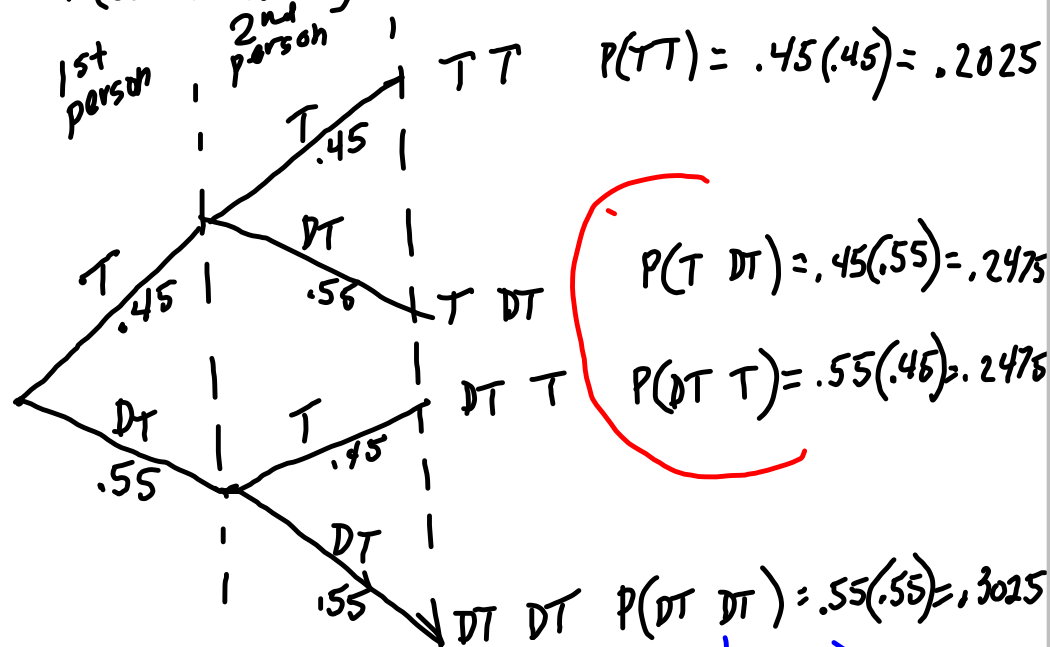


5.17
pg 197

45% take prescription drugs
2 adults
 $x = \#$ who take drugs

$$P(\text{take}) = .45$$

$$P(\text{don't take}) = .55$$



$$P(0) = .3025$$
$$P(1) = .4950$$
$$P(2) = .2025$$

x	$P(x)$
0	.3025
1	.4950
2	.2025

5.35
pg 205

x	$P(x)$
office building	.15
theater	.30
Parking Garage	.45
nothing	.10

x	$P(x)$	$x P(x)$	x^2	$x^2 P(x)$
0	.10	0	0	0
2	.45	.90	4	1.80
5	.30	1.50	25	7.50
10	.15	1.50	100	15.00

$$\sum P(x) = 1.00 \quad \sum xP(x) = 3.90 \quad \sum x^2 P(x) = 24.30$$

$$\mu = E(x) = 3.90$$

$$\sigma^2 = \sum x^2 P(x) - \mu^2$$

$$= 24.30 - 15.21$$

$$= 9.09$$

$$\sigma = \sqrt{9.09}$$

$$\approx 3.0150$$

Math Phobic .70

Not .30

Choose 10 students

Find probability that exactly 4 are math phobias.

$$P(x=4) = {}_{10}C_4 (.70)^4 (.30)^6$$

show work

$$= \frac{10!}{4! 6!} (.70)^4 (.30)^6$$

$$= \frac{10 \cdot 9 \cdot 8 \cdot 7}{4 \cdot 3 \cdot 2 \cdot 1} (.70)^4 (.30)^6$$

$$= (10 \cdot 3 \cdot 7) (.70)^4 (.30)^6$$

$$= 210 (.70)^4 (.30)^6$$

$$\approx .0368$$

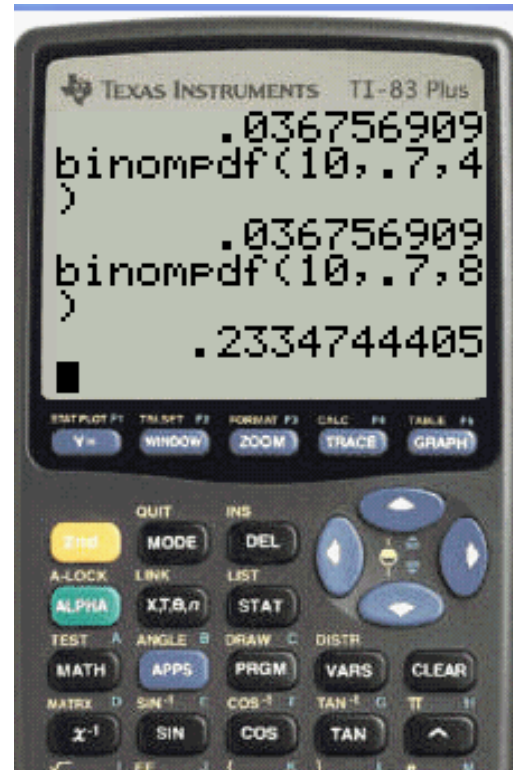
*use the calculator
write this function*

$$P(x=4) = \text{binompdf}(10, .70, 4) \approx .$$

n, p, x

$$\approx .0368$$

$$P(x=8) = \text{binompdf}(10, .70, 8) \approx .2335$$



What's the probability that at most
4 people are math phobic

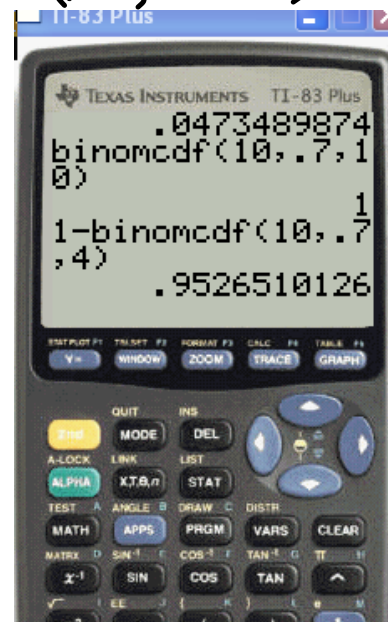
$$P(x \leq 4) = \text{binomcdf}(10, .7, 4) \approx .0473$$

Probability of at least 5

$$P(x \geq 5) = \text{binomcdf}(10, .7, 10) - \text{binomcdf}(10, .7, 4)$$

write $\rightarrow \approx 1 - \text{binomcdf}(10, .7, 4)$
 $\approx .9527$

$$P(x \leq 10) = \text{binomcdf}(10, .7, 10) = 1$$



$$P(2 \leq x \leq 5) =$$

$$\text{binomcdf}(10, .7, 5) - \text{binomcdf}(10, .7, 1)$$

$$P(2 < x < 5)$$

$$\text{binomcdf}(10, .7, 4) - \text{binomcdf}(10, .7, 2)$$

Scientific notation 8.34 E^{-5}

.0000834

.0001

p has been .77

P not been .23

$P(x \geq 1) = 1 - \text{binomcdf}(18, .23, 0)$