Anso2	4= 5hr (18) r = 03	(n
N.	Sod = 0.5 hs	
	let X be the no of his that a beer printer	pointer -
	Car work with a pair of AAAA batteries	<u> </u>
	$\sim 10^{-5} \times 10$	
	let 4 be the duration that a lover pointer can u	lork -
	with 20 pars of MATA batteres (x)	(d)
	7~ N (100, 20× 0.52)	
- 2	= (-2) x003+(-1) x006+(12) x001 /	
	P(4>105)	
	- 1- P(Y<105) + #Rcode	
	= 1- pnorm (105,100, \(\bar{20*0.5}\)	
	z [0.01267366]	
D	1 [a(x) = 4] = 10/	
Anso B4	$\sim$	
-	P(X=x) (3) (7x=-2001)	(h) -
	1 9 006 X=-1	
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
	(500) (1 0) (1 000) -11 m	(9)
ده)	let X, Xn be IID with same diet as X & X	be Sample -
(H)	mean of (X, 1) (200 > X)4-1	
	OI steers the	
	( DASDAD ( 000 ) mould -1	*
	SEVEUTOU, -	N 800 - 12

$= \frac{\alpha}{2} + \frac{\beta}{2} + $
2 red dan line
Toling where - 2 x Mo 2 x C 1 x A 1 a 10
2 x00 3 1- 1 x 00 f + 12 x 00 1 x 101
1006 - Oob +102 Arou 100
0 = 10 (S 005 <sup>2</sup> ) (O = 100 cm
101 y be the duration that a laser pointer ray horse
(b) Var(x) - 2000 E(x2) 4 (E(x)) 2 08 149 cm
1 200 000 001
$= (-2)^2 \times 0.2 + (1)^2 \times 0.1 \times 0.1$
$= (-2)^{2} \times 0.3 + (-1)^{2} \times 0.06 + (12)^{2} \times 0.01 = 0^{2}$
= 10102 + 006 + 1404 - VO
- (16.0)
- 1- prioring (105,100, c/2/8,01)
$(c) E_{\alpha}(\bar{x}) - u - (\bar{x}) = 0$
(A) = 1 - 10
DORON WITH PMF (-1) Ch)
(a) Variance (x) - 2 0 52 - 1607
n. Tozz
SI-Y
(e) For n= 100 \\ \times \tau \cdot\ \( \tau \cdot\ \t
0 P(X) DOE)
- $D(y = 0.00)$
#rcode 5005) Sod - 51602 - 0040249
10
7- pnom (0.5 0, 0.40249)
= 00107073

Ans. 36	Fluctuations of Value Stock are X1, X2 - X400
	Growth (19 V) 1/1, 42 4400
	E(X;) = 0001; Var (X)=001; E(Y)=0 Var(Y)=0025
2	let combined led of the book land of a viving
	Let combined fluctuation be for Value Stock = X, +X2+-X400 Growth stock > 4- 4, + 42+- +4400
	Growth stock > 9- 9, 142+- \$1400
	ECXJ = 400 x0001 = 4 Var [X]= 400x0001-4
	ECY) = 400 x 0 = 0 Var (4) = 400 x 0 25 = 100
	(0> X-V/Q -1 -
(a)	P(X>0) = 1-P(X <0) X-1 =0
	# Rcode 1 1-01- (X-Y)7
	= 1- pnom(0,4,2)1-(x-1) on/
	= [009772499.0] - CX-MINN
( b)	P(4>0) ENDA P(450) mona -1 -1
(D)	# Reado [SEPHFUE.O] -
	- 1- prom (0,0,10)
•	- 1- prom (0,0,10)
	= 1005
	2 1 0 (14 ( 0 2 )
(C)	P(X)20) = 1-P(X(20)
	= 1- pnorm (20, 9, 2) = 6.661338e <sup>-16</sup>
	- 6.661338e-16
	20
1	

(d)	P(4>20) dod	of Vialine of	Flustions	(A) (1)
- 001/2	1- P(Y 420 + r code	0 0 11	000 - (1X)	The same of the sa
mx tg X + 1/ - 1/ - 1/ - 1/ - 1/ - 1/ - 1/ - 1/	1- prorm (20 0.02275013)	0,10 m) b	let combine	
4-(e) 11 F	(Y>X) (Y-X>0)	1000×001 =	ECX)=	
=	1- P(4-X <	(0) (0-0x00h	- 1.77.1	
	E(Y-X) = 0-4 la(Y-X) = 100.	=-4 ohora u	< X) \ \ -1 \ \ -1 \ \ -1 \ \ \ -1 \ \ \ -1 \ \ \ \	-   (D)
9 -	Var (4-x) = 10	4PPHSEEPON		
= [	1- prom (0,- 0.347444331	obox 8 tt	0<410	(4)
	(0)	1506 0 0) wante		
CS	Procon (20)	1 - (002	XII	(2)
	. 6613386	0 6 1		