

- Mode= 3 and 0
Median=1
Mean=2.1860
population standard deviation= 2.3453
sample standard deviation = 2.3730
population variance = $(2.3453)^2$

2. $E(x) = 5.2$

3. $\frac{5}{5+11} = \frac{5}{16}$

4. $X < 50 + 3(6) = 68$

5. (a) draw venn diagram.
Answer: 0.25

(b) odds in favor of B: 9 to 11

6. $\frac{C(30,15)C(20,5)}{C(50,20)}$

7. solve $222 = 180 + k*35$ for k and get that $k = 1.2$

$$P(138 \leq X \leq 222) \geq 1 - \frac{1}{1.2^2} = 0.3056$$

8. (a) $\frac{90+50}{583}$
(b) $\frac{20+60}{230}$

9. $n = 40, p = 0.4$

(a) $r = 25$ (the number of successes)

$$\text{binompdf}(40, 0.4, 25) = 0.0021$$

(b) $r = 14, 15, 16, \dots, 21$

$$\text{binomcdf}(40, 0.4, 21) - \text{binomcdf}(40, 0.4, 13) = 0.7497$$

10. (a) $0.1 + 0.2 + 0.05 + 0.4 + 0.15 = 0.9$

(b) $\frac{0.2+0.15}{0.2+0.1+0.15} = \frac{0.35}{0.45}$

11. draw a chart
 $\text{frac}732$

12. draw a tree.

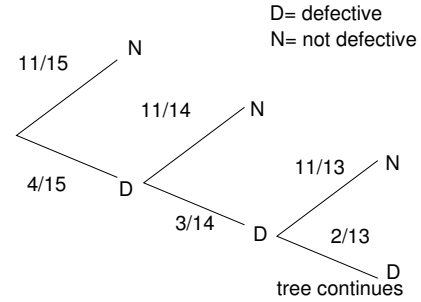
Answer: $\frac{20}{27} * \frac{21}{25}$

13. $\frac{7(6!3!)}{9!}$

14. draw a tree.

(a) $X = 1, 2, 3, 4, 5$

(b) $\frac{4}{15} * \frac{11}{14}$



15. since one kid got \$10 and one got nothing there are 18 envelopes left to choose from: 5 with money and 13 without.

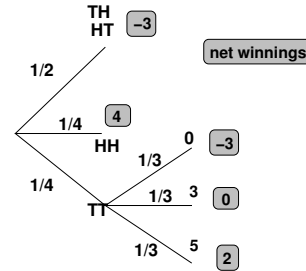
answer: $\frac{5}{18}$

16. draw a tree.

compute:

$$P(G|C) = \frac{0.7*0.25}{0.7*0.25+0.3*0.1} = 0.8537$$

17. Here is the tree.



X	-3	0	2	4
prob.	$\frac{1}{2} + \frac{1}{4} * \frac{1}{3}$	$\frac{1}{4} * \frac{1}{3}$	$\frac{1}{4} * \frac{1}{3}$	$\frac{1}{4}$