1. Mode= 3 and 10
   Median=8.5
   Mean=7.6
   population standard deviation= 3.9038
   sample standard deviation = 3.9536
   population variance = $(3.9038)^2$

2. $E(x) = 3.1$

3. $\frac{3}{3+17} = \frac{3}{20}$

4. $X < 60 + 2(8) = 76$

5. (a) draw venn diagram.
   Answer: 0.4
   (b) odds in favor of B: 3 to 2

6. $\frac{C(20,8)C(10,2)}{C(30,10)}$

7. solve $292 = 220 + k*45$ for k and get that $k = 1.6$

   $P(148 \le X \le 292) \ge 1 - \frac{1}{1.6^2} = 0.609375$

8. (a) $\frac{60+120}{583}$
   (b) $\frac{30+40}{175}$

9. n=50, p = 0.4
   (a) r = 20 (the number of successes

   binompdf(50, 0.4, 20) = 0.1146
   (b) r = 11, 12, 13,....20

   binomcdf(50,0.4,20) - binomcdf(50,0.4,10)
   = 0.5588

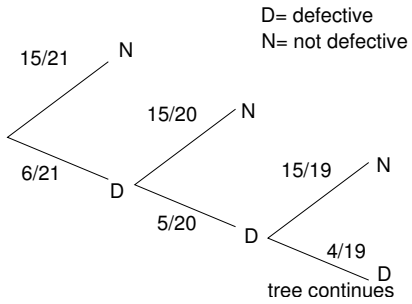
10. (a) $0.2 + 0.05 + 0.4 + 0.15 = 0.8$
    (b) $\frac{0.2+0.15}{0.2+0.4+0.15} = \frac{0.35}{0.75}$

11. draw a chart
    $\frac{11}{32}$

12. draw a tree.
    Answer: $\frac{7}{17} * \frac{5}{16}$

13. $\frac{6(5!4!)}{9!}$

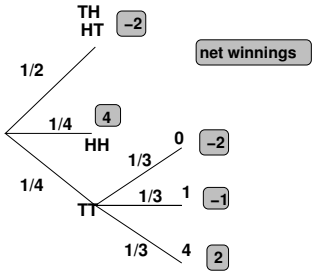
14. draw a tree.
    (a) X = 1, 2, 3, ..., 7
    (b) $\frac{6}{21} * \frac{15}{20}$



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

16. draw a tree.
    compute:
    $P(G|C) = \frac{0.6*0.4}{0.6*0.4+0.4*0.15} = 0.8$

17. Here is the tree.



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

Check the back of the page for more problems.