Answers

1. 68/475

2. (a) 0.18
   (b) 0.48
   (c) 0.6

3. 77/111

4. 11/36

5. 0.19

6. 0.7

7. 0.3

8. 0.55

9. 9 to 11

10. 0.0016 obtained from $\mathsf{binompdf}(4, 1/5, 4)$

11. (a) No (b) No

12. (a) # of chips   (b) 11   (c) 9.5   (d) 1.440   (e) 9.604

13. 0.766

14. mean = 7.73, Stdev=3.967, Var=15.7371, median=8, mode=5.

15. (a) 0.0155,   (b) 0.9884,   (c) 0.5189,   (d) 120

16. 0.193

17. (a) Finite Discrete, $X = \{1, 2, 3, ..., 11\}$
    (b) Continuous, $X = \{c|c$ is the temperature of the hot tea$\}$
    (c) Infinite Discrete, $X = \{1, 2, 3, ...\}$.

18. 0.75

19. $40

20. $E(x) = -0.6$, so expect to lose about 60 cents

21. 0.7355

22. (a) 0.0046 obtained by $\mathsf{binompdf}$(20,.5,4)
    (b) 0.4119 obtained from 1-$\mathsf{binomcdf}$(20,.5,10)
    (c) 0.9941 obtained from $\mathsf{binomcdf}$(20,.5,15)
    (d) 0.2517 obtained from $\mathsf{binomcdf}$(20,.5,18)-$\mathsf{binomcdf}$(20,.5,11)

23. 0.4743 obtained by $c(3, 1)c(21, 7)/c(24, 8)$

24. 0.3636 using $1 - \mathsf{binomcdf}(80, 0.12, 10)$

25. $1 - \dfrac{C(240, 0)c(460, 100)}{C(700, 100)}$

26. 648

27. 5/6

28. (a) $\dfrac{13}{60} \approx 0.2167$ (b) $\dfrac{10}{47} \approx 0.2128$.

29. 0.9457

30. (a) 16   (b) It is binomial with n=4, p=0.5, and r changing from 0, 1, 2, 3, 4.

x	0	1	2	3	4
$P(X = x)$	0.0625	0.25	0.375	0.25	0.0625

31. (a) 0.8054   (b) 0.5827   (c) 0.0188

32. (a) 0.543   (b) 0.189   (c) 0.741   (d) 0.1532   (e) 0.45