

Answers to sample test 1

Problem 1.

- (a) $\bar{x} = \frac{113}{7} \approx 16.14$, Median= 2
- (b) $R = 326$, $s^2 = 9264.1428$, $s \approx 96.25$
- (c) $z = -0.1469$
- (d) Yes, because it is within 3 standard deviations from the mean.

Problem 2.

$$P(B \cap A^c) = 0.48$$

Problem 3.

- (a) ≈ 0.41 , (b) ≈ 0.1 , (c) ≈ 0.1

Problem 4.

$$P(A) = 0.5, P(B) = 0.25, P(A \cap B) = 0.25, P(A \cup B) = 0.5, P(B^c) = 0.75.$$

Problem 5.

Sampling distribution of range.

R	P
2	1/15
4	1/15
6	1/5
10	1/15
12	1/15
14	1/15
16	1/15
20	2/15
22	1/15
26	2/15
32	1/15

Sampling distribution of mean.

\bar{x}	P
1	1/15
3	1/15
4	1/15
6	1/15
7	1/15
9	1/15
11	1/15
14	2/15
16	1/15
17	2/15
19	1/15
20	1/15
27	1/15