Res 341 - Quiz for Week 4

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Find the mean for the given sample data. Unless otherwise specified, round your answer to one more decimal place than that used for the observations.

1) 13, 20, 16, 13, 14   1) _____

    A) 13   B) 15.2   C) 19   D) 14

Find the median for the given sample data.

2) A new business had the following monthly net gains: 2) _____

    $6956 $3158 $1329 $7616 $7429
    $1842 $3728 $8172 $5311 $5900

    A) $5144.10   B) $5311.00   C) $5715.67   D) $5605.50

Find the range and standard deviation for each of the two samples, then compare the two sets of results.

3) When investigating times required for drive-through service, the following results (in seconds)   3) _____
    were obtained.

Restaurant A	120	123	153	128	124	118	154	110
Restaurant B	115	126	147	156	118	110	145	137

    A) Restaurant A: 46; 16.2
       Restaurant B: 44; 16.9
       It is inconclusive as to which data set has more variation.

    B) Restaurant A: 44; 16.2
       Restaurant B: 46; 16.9
       Both measures indicate there is more variation in the data for restaurant B than the data for
       restaurant A.

    C) Restaurant A: 46; 16.9
       Restaurant B: 44; 16.2
       Both measures indicate there is more variation in the data for restaurant A than the data for
       restaurant B.

    D) Restaurant A: 44; 16.1
       Restaurant B: 46; 16.9
       Both measures indicate there is more variation in the data for restaurant B than the data for
       restaurant A.

Find the indicated probability.

4) If you flip a coin three times, the possible outcomes are HHH HHT HTH HTT THH THT TTH   4) _____
    TTT. What is the probability of getting at least two tails?

    A) $\frac{1}{2}$ B) $\frac{1}{8}$ C) $\frac{3}{8}$ D) $\frac{5}{8}$

Find the indicated probability by using the special addition rule.

5) A relative frequency distribution is given below for the size of families in one U.S. city.

5) _____

Size	Relative frequency
2	0.457
3	0.204
4	0.192
5	0.099
6	0.030
7+	0.018

A family is selected at random. Find the probability that the size of the family is between 2 and 5 inclusive. Round approximations to three decimal places.

A) 0.952   B) 0.396   C) 0.853   D) 0.556

Find the indicated probability.

6) The following contingency table provides a joint frequency distribution for the popular votes cast in the presidential election by region and political party. Data are in thousands, rounded to the nearest thousand.

6) _____

Political Party

		Demo. P_1	Repub. P_2	Other P_3	Total
Region	Northeast R_1	9046	11,336	101	20,483
	Midwest R_2	10,511	14,761	169	25,441
	South R_3	10,998	17,699	136	28,833
	West R_4	7022	10,659	214	17,895
	Total	37,577	54,455	620	92,652

A person who voted in the presidential election is selected at random. Compute the probability that the person selected was in the West and voted Republican.

A) 0.781   B) 0.196   C) 0.588   D) 0.115

Solve the problem.

7) How many ways can an IRS auditor select 6 of 12 tax returns for an audit?

7) _____

A) 720   B) 665,280   C) 924   D) 2,985,984

Find the indicated binomial probability.

8) In a certain college, 20% of the physics majors belong to ethnic minorities. If 10 students are selected at random from the physics majors, what is the probability that exactly 2 belong to an ethnic minority?

8) _____

    A) 0.00007   B) 1.8   C) 0.30199   D) 0.00671

Use a table of areas to find the specified area under the standard normal curve.

9) The area that lies to the left of 1.13

9) _____

    A) 0.8485   B) 0.8708   C) 0.8907   D) 0.1292

Use a table of areas for the standard normal curve to find the required z-score.

10) Find the z-score having area 0.09 to its left under the standard normal curve.

10) _____

    A) -1.39   B) -1.26   C) -1.34   D) -1.45