Quiz 5 Review AP Statistics Name:

1. A six-sided die has the numbers 1 to 6. You roll the die 4 times and calculate the total of the 4 rolls. Use simulation methods to determine the probability that the sum of the 4 rolls is less than 10. Use the random digits table beginning at row 112 to carry out 10 repetitions and determine the probability that the sum is less than 10.

**112** 59636 88804 04634 71197 19352 73089 84898 45785

**113** 62568 70206 40325 03699 71080 22553 11486 11776

**114** 45149 32992 75730 66280 03819 56202 02938 70915

**115** 61041 77684 94322 24709 73698 14526 31893 32592

1. The table below gives the counts (in thousands) of earned degrees in the United States in a recent year, classified by level and by the gender of the degree recipient.

|  |  |  |
| --- | --- | --- |
|  | Degree |  |
|  | Bachelor’s | Master’s | Professional | Doctoral | Total |
| Female | 616 | 194 | 30 | 16 | 856 |
| Male | 529 | 171 | 44 | 26 | 770 |
| Total | 1145 | 365 | 74 | 42 | 1626 |

Suppose one degree recipient from this group is selected randomly.

1. What is the probability that the person selected earned a Master’s degree?
2. What is the probability that the person selected earned a Professional or Doctoral degree?
3. What is the probability that the person selected is female or earned a Master’s degree?
4. The table below is a probability model for the number of cars in a randomly-selected

household in the United States. (Based on U.S. Census 2000 data).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Number of cars** | 0 | 1 | 2 | 3 | 4 | 5 or more |
| **Probability** | 0.07 | 0.19 | 0.47 | ? | 0.06 | 0.02 |

1. What is the probability that a randomly selected household has three cars?
2. What is the probability that a randomly-selected household has at least 2 cars?

**4.** A surveyof college students found that 56% live on campus, 62% participate in a campus meal program and 42% do both.

1. Draw a Venn diagram

 If a student is selected at random, find the probability of selecting

1. a student that lives on campus but doesn’t have a meal plan

c) a student does not live on campus and doesn’t have a meal plan

1. a student has a meal plan but does not live on campus