Chapter 6 Quiz Review Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

AP Stats

1. A game of chance with a spinner is set up so the chances of winning $1, $2, $5, and $20 are 1/2, 1/4, 3/16, and 1/16, respectively.

1. Construct a probability distribution for the data

(c)Find *P*(X > 4).

 (d)Find *P*(2 ≤ X < 10).

2. The number of adults living in homes on a randomly selected city block is described by the following probability distribution.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Number of adults, x**  | 1 | 2 | 3 | 4 |
| **Probability, P(x)** | 0.25 | 0.50 | 0.15 | 0.10 |

1. What is the mean of the probability distribution?
2. What is the standard deviation of the probability distribution?

3. Indicate whether each is a discrete or continuous random variable:

1. The height of students at Osborne
2. The number of students graduating from Osborne
3. The time it takes to get from the Hansard Building to the new Gym

4. A car salesman gets paid a commission for every vehicle he sells. The mean of his monthly commission is $8,000 with a standard deviation of $1,560.

1. What is the mean for his commission for two months?
2. What is the standard deviation for his commission for two months?

5. Cellphone usage minutes is shown in the following probability distribution :

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Minutes, x**  | 200 | 400 | 600 |  | 800 |  |
| **Probability, P(x)** | 0.25 | 0.40 | 0.25 |  | 0.10 |  |

1. Find the mean temperature and the standard deviation
2. A billing plan charges a monthly fee plus a per minute charge. The formula for calculating the bill is: 

What are the mean and standard deviation of the monthly bill?