

Quiz 2 February 20, 2019

Name and section: _____

1. (5 points) There are 5 marbles in a bag: 4 are blue, and 1 is red. What is the probability that a blue marble gets picked?

Write your answer here.

2. (5 points) Find the regression equations for predicting final score from midterm score, based on the following information:

average midterm score = 70, SD of midterm score = 10

average final score = 55, SD of final score = 20, $r = 0.6$

Hint: in the formula $\hat{y} = mx + b$, the dependent variable is y and independent variable is x. The dependent variable is predicted from independent variable.

Formula: To form a linear regression equation of the form $\hat{y} = mx + b$, the formulas for the creation of a linear regression equation of the form $\hat{y} = mx + b$ simplify to:

$$m = \frac{r \cdot SD_y}{SD_x} \text{ and } b = \bar{y} - m\bar{x}$$

Write your answer here.