NYCCT MAT1372 Halleck Fall 2015 Practice exam 1, part 1

* You may use scientific or graphing calculator
* At the end of class, be sure to turn in your formula sheet (1 sheet, 2 pages, hand-written), worth 10%.

1. The formula **=B$2\*$A2** is located in cell **B1**.
   * 1. What does cell B1 evaluate to?
     2. If this was copied and pasted into cell D3, what would the resulting formula be?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** | **D** |
| **1** | 2 | **=B$2\*$A1** | 4 | 5 |
| **2** | 3 | 3 | 8 | 6 |
| **3** | 5 | 4 | 3 | ????????? |
| **4** | 4 | 3 | 4 | 9 |

1. A histogram uses bins, each of which represents a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. If the range of our

data is 2.1-7.8 and we want ~6 bins, then the width of each bin is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (show your calculation.)

If we want ~12 bins, then the width of each bin is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(show your calculation.) If you were going to put this into Excel and use “frequency”, then what would the set of right

endpoints for the bins be for this last one: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Consider an experiment that consists of withdrawing a ball from the box, replacing it, and withdrawing a second ball. Draw a tree diagram. Be sure to include labels and probabilities. Use the tree diagram to make a table with outcomes and probabilities. **Express all probabilities as fractions in lowest terms.** There are 2 red, 2 blue and 1 green ball in the box.
   1. What is the sample space of this experiment?
   2. As a set, what is the event A: the first ball drawn is red? What is its probability?
   3. As a set, what is the event B: the same color ball is drawn twice? What is its probability?
2. On an outing of 100 students to a state park, 40 students brought neither a backpack nor a hat, 50 brought a hat, and 40 brought a backpack. If one of them was randomly chosen, find the probability that he or she brought
3. A backpack or a hat

(b)   A backpack and a hat