NYCCT MAT1372 Halleck Fall 2015 Practice exam 1 solns, 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? 3\*2=6
     2. If this was copied and pasted into cell D3, what would resulting formula be?=D$2\*$A4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **A** | **B** | **C** | **D** |
| **1** |  | 2 | **=B$2\*$A2** | 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) \_interval\_. If the range of our

data is 2.1-7.8 and we want ~6 bins, then the width of each bin is \_\_(7.8-2.1)/6=5.7/6~1\_\_\_\_\_\_\_\_\_ (show your calculation.)

If we want ~12 bins, then the width of each bin is \_\_\_(7.8-2.1)/12~0.5\_\_\_(show your calculation.) If you were going to put this into Excel and use “frequency”, then what is the set of right endpts for

bins for last one: 2.4, 2.9, 3.4, 3.9, 4.4, 4.9, 5.4, 5.9, 6.4, 6.9, 7.4, 7.9

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.

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* 1. What is the sample space of this experiment?

1st row of table above

* 1. As a set, what is the event A: the first ball drawn is red? What is its probability?

 probability is 10/25=2/5

* 1. As a set, what is the event B: the same color ball is drawn twice? What is its probability?

 probability is 9/25

1. 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
2. A backpack or a hat 100-40 = 60

So P(HUB)=0.6

(b)   A backpack and a hat |H∩B|=|H|+|B|-|HUB|=50+40-60=30

So P(H∩B)=0.3