Lesson 1: Probability; Discrete Random Variables

Homework

## Solutions

**Please note that the steps show rounded numbers, but that the final answers to the problems are calculated without rounding.**

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| Problem | Part | Solution |
| 1 | - | No probability can be greater than 1 or less than 0  The probilities of all possible events must add up to exactly 1  The probability of an event not happening is equal to 1 minus the probability that it does happen. |
| 2 | - | 38.3% The fact that all of the probabilities had to add up to 1 and that the chance of something happening is equal to 1 minus the chance that it does not happen. |
| 3 | - | 15.8% |
| 4 | - | 78.1% The third rule (the chance of something happening is equal to 1 minus the chance that it does not happen). |
| 5 | - | 81.4% |
| 6 | - | It is not possible to answer this question using the data given. There may or may not be students from Texas, but we can’t tell how many just from this data. |
| 7 | - | 0.14 |
| 8 | - | 0.46 |
| 9 | - | 0 |
| 10 | - | It is more likely to go up. |