WEEK 2: HOMEWORK

Started: Jun 18 at 6:21pm

QUIZ INSTRUCTIONS

Click the button to start the homework set. You can re-do this assignment as often as you need.

Question 1 — 2 pts

The probability of drawing one card and getting queen is 4/52. This would be considered:

Homework Help:

2DA. Definition of probabilities and classical, empirical, subjective probabilities (DOCX)

- Classical probability
- Manufactured probability
- Empirical probability
- Subjective probability

Question 2 — 2 pts

Given the following information, find the probability that a randomly selected student will be very tall. Number of students who are very short: 45, short: 60, tall: 82, very tall: 21

Homework Help:

2DB. Probabilities from a given distribution of frequencies (DOCX)

- 49.5%
- 21.6%
- 21.0%
- 10.1%

Question 3 — 2 pts

Given the following information, find the probability that a randomly selected dog will be a poodle. Number of dogs who are poodles: 31, golden retrievers: 58, beagles: 20, pugs: 38

Homework Help:

2DB. Probabilities from a given distribution of frequencies (DOCX)

- 21.1%
- 58.0%
- 42.0%
- 39.5%

Question 4 — 2 pts

Given that there is a 22% chance it will rain on any day, what is the probability that it will rain on the first day and be clear (not rain) on the next two days?

Homework Help:

2VA: Probabilities given probability of success and 2 or more events (0:51)

2DC. Probabilities given probability of success and 2 or more events (DOCX)

- 17.2%
- 1.1%
- 78.0%
- 13.4%

Question 5 — 2 pts

Consider the following table. What is the probability of no?

	Red	Blue	Total

QUESTIONS

Time Elapsed: Hide

Attempt due: May 20 at 12:59am

0 Minutes, 13 Seconds

Yes	15	21	36
No	38	13	51
Total	53	34	87

Homework Help:

2VB: Conditional probabilities from a table (1:45)

- 51/87
- 13/34
- 51/34
- 13/51

Question 6

2 pts

Consider the following table. What is probability of no, given blue?

	Red	Blue	Green	Total
Yes	33	44	14	91
No	18	5	28	51
Total	51	49	42	142

Homework Help:

2VB: Conditional probabilities from a table (1:45)

- 51/142
- 44/49
- 49/142
- 5/49

Question 7

2 pts

A card is randomly selected from a standard deck of 52 cards. What is P(heart)?

Homework Help:

2VC: Probabilities when drawing one card from a deck (0:59)

2DD. Probabilities when drawing one card from a deck (DOCX)

- 26/52
- 1/52
- 13/52
- 4/52

Question 8

2 pts

In a sample of 400 customers, 140 say that service is poor. You select two customers without replacement to get more information on their satisfaction. What is the probability that both say service is poor?

Homework Help:

2VE: Probabilities of drawing several from many without replacement (1:35)

2DE. Probabilities of drawing several from many without replacement (DOCX)

- 65.00%
- 12.25%
- 35.00%
- 12.19%

Question 9

2 pts

In a sample of 528 customers, 237 say they are happy with the service. If you select three customers without replacement for a commercial, what is the probability they will all say they are happy with the service?

Homework Help:

2VE: Probabilities of drawing several from many without replacement (1:35)

2DE. Probabilities of drawing several from many without replacement (DOCX)

- 14.96%
- 12.83%

- 9.04%
- 8.98%

Question 10 2 pts

A salesperson purchases the deli's specialty sandwich one day, and a mechanic purchases the deli's specialty sandwich the next day. How would you classify these events?

Homework Help:

2DF. Independent versus dependent events; mutually exclusive and non-mutually exclusive events, complements (DOCX)

- Independent
- Dependent

Question 11 2 pts

A company sells 14 types of crackers that they label varieties 1 through 14, based on spice level. What is the probability that one purchase results in a selection of a cracker with an even number or a number less than 5?

Homework Help:

2VF (1): Probabilities using addition rule from values and from percentages (0:54)

2DG. Probabilities using addition rule (DOCX)

- 64.3%
- 71.4%
- 14.0%
- 35.7%

Question 12 2 pts

Of the shirts produced by a company, 8% have loose threads, 7.5% have crooked stitching, and 3.5% have loose threads and crooked stitching. Find the probability that a randomly selected shirt has loose threads or has crooked stitching.

Homework Help:

2VF (1): Probabilities using addition rule from values and from percentages (0:54)

2DG. Probabilities using addition rule (DOCX)

- 19.0%
- 11.0%
- 12.0%
- 15.5%

Question 13 2 pts

Randomly select a customer that is happy with the store. Randomly select a customer who infrequently shops at the store. Are these events mutually exclusive?

Homework Help:

2DF. Independent versus dependent events; mutually exclusive and non-mutually exclusive events, complements (DOCX)

- Mutually exclusive events
- Non-mutually exclusive events

Question 14 2 pts

In a sample of 800 adults, 242 said that they liked sugar cereals. Three adults are selected at random without replacement. Find the probability that all three like sugar cereals.

Homework Help:

2VG: Probabilities of drawing several from many without replacement, all or none outcomes (2:16)

2DH. Probabilities of drawing several from many without replacement, all or none outcomes

(DOCX)

- 2.70%
- 2.74%
- 2.73%
- 2.77%

Question 15 — 2 pts

In a sample of 80 adults, 15 said that they would buy a car from a friend. Three adults are selected at random without replacement. Find the probability that none of the three would buy a car from a friend.

Homework Help:

2VG: Probabilities of drawing several from many without replacement, all or none outcomes (2:16)

2DH. Probabilities of drawing several from many without replacement, all or none outcomes (DOCX)

- 17.27%
- 53.16%
- 53.64%
- 15.88%

Question 16 — 2 pts

A sock drawer has 17 folded pairs of socks, with 7 pairs of white, 6 pairs of black and 4 pairs of blue. What is the probability, without looking in the drawer, that you will first select and remove a black pair, then select either a blue or a white pair?

Homework Help:

2VH (1): Probability with multiplication rule from numbers and from probability outcomes (1:30)

2VH (2): Probability with multiplication rule from numbers and from probability outcomes (0:58)

2DI. Probability with multiplication rule (DOCX)

- 24.26%
- 35.25%
- 64.71%
- 22.84%

Question 17 — 2 pts

An investment advisor believes that there is a 28% chance of making money by investing in a specific stock. If the stock makes money, then there is a 43% chance that among those making money, they would also get a dividend. Find the probability that the investor makes money and receive a dividend.

Homework Help:

2VH (1): Probability with multiplication rule from numbers and from probability outcomes (1:30)

2VH (2): Probability with multiplication rule from numbers and from probability outcomes (0:58)

2DI. Probability with multiplication rule (DOCX)

- 28%
- 43%
- 12%
- 15%

Question 18 — 2 pts

An investment advisor believes that there is a 60% chance of making money by investing in a specific stock. If the stock makes money, then there is a 50% chance that among those making money, they would also get a dividend. Find the probability that the investor makes money but does not receive a dividend.

Homework Help:

2VH (1): Probability with multiplication rule from numbers and from probability outcomes (1:30)

2VH (2): Probability with multiplication rule from numbers and from probability outcomes (0:58)

2DI. Probability with multiplication rule (DOCX)

- 10%
- 50%
- 60%
- 30%

Question 19 — 2 pts

A smartphone company found in a survey that 14% of people did not own a smartphone, 31% owned a smartphone only, 17% owned a smartphone and only a tablet, 25% owned a smartphone and only a computer, and 13% owned all three. If a person were selected at random, what is the probability that the person would own a smartphone only or a smartphone and computer?

Homework Help:

2VF (2): Probabilities using addition rule from values and from percentages (1:01)

2DG. Probabilities using addition rule (DOCX)

- 31%
- 56%
- 25%
- 48%

Question 20 — 2 pts

Match the terms and their definitions

Homework Help:

2DA. Definition of probabilities and classical, empirical, subjective probabilities (DOCX)

2DF. Independent versus dependent events; mutually exclusive and non-mutually exclusive events, complements (DOCX)

0 and 1	[Choose]
1 - P(E)	[Choose]
The occurrence of one event does not affect the occurrence of the other	[Choose]
Cannot occur at the same time	[Choose]
Probability of an event given that another event has occurred	[Choose]

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