Week 23 Pre-Algebra Assignment:

Day 1: pp. 430-431 #1-14, 21-32
Day 2: pp. 435-436 #1-36
Day 3: pp. 442-443 #1-35
Day 4: pp. 445-446 #1-23
Day 5: p. 447 #24-49

Notes on Assignment:

Pages 430-431 (#1-14, 21-32)

Work to show:
#1-10: Answers only
#11-14: Show the factorial notation and the answer.
#21-32: Two answers for each. Show the factorial notation and the answer.

General Notes for this section – Students received a handout in class. Please refer to the handout for these problems.

#1-10: When order is important, then it is a permutation.

#11-14: Use the formula $_nC_r = \frac{n!}{r!(n-r)!}$. Fill in the corresponding numbers and simplify. It may be helpful to expand all of the factorial notations and cancel where you can.

#21-32: If it is a permutatation, use $_nP_r = \frac{n!}{(n-r)!}$ and if it is a combination, use $_nC_r = \frac{n!}{r!(n-r)!}$

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Pages 435-436 (#1-36)

Work to show:
All Problems: Answers only

General Notes for this section – All probabilities can be listed as fractions only. You do not need to change them into a decimal. Just simplify the fractions if necessary. Students received a handout in class. Please refer to the handout for these problems.

Remember: The probability of event E is $P(E) = \frac{\#\ desired\ outcomes}{\#\ possible\ outcomes}$

#1-3: Since there are 15 total blocks, the total # of possible outcomes is 15.

#16: This is asking you to find the probability that the lane drawn was lane 5.

#26-30: These are all mutually exclusive events, so either just reason through the problem as you did the previous problems or use the formula P(A or B) = P(A) + P(B).

Pages 442-443 (#1-35)

Work to show:

#1-10: Answers only
#11-35: Multiplication problem and then simplified answer

General Notes for this section – All probabilities can be listed as simplified fractions only. You do not need to change them into a decimal. Students received a handout in class. Please refer to the handout for these problems.

You will need the following formulas:

For independent events A and B, $P(A \text{ and } B) = P(A) \cdot P(B)$

For dependent events A and B, $P(A \text{ and } B) = P(A) \cdot P(B|A)$

P(A|B) stands for "the probability of A, given B has occurred"

#1-10: If the two events do not effect each other, then the events are independent.

#11-24: These are all independent events, whether you have 2 spinners or just spin a single spinner more than once. You need to find the probability of each event and multiply them together.

#25-35: These are not independent, so when figuring out the 2nd probability, consider how the first event's occurrence has changed the 2nd event's outcomes.

#34: Calculate the P(E or F) and P(G or H) separately. Keep in mind that E and F are independent events. (Look back to see how we calculate probabilities for independent events.) E and F are also independent events. Now look at the connective word in this problem. When we want the probability of one event *"and"* another event happening, we multiply the probabilities of both events together, whether they are independent or dependent events.

#35: This is like #34. Find the P(B) and P(F or G) first.

Pages 445-446 (#1-49)

Work to show:

#All problems: Show the same work that was required earlier sections of this chapter.

General Notes for this section – Students should refer to the handouts from this chapter for help if needed. All probabilities can be left as simple fractions, and do not have to be listed in decimal form.

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