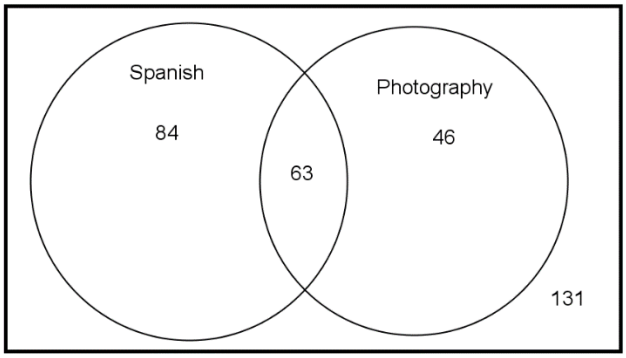
Algebra 2
Secondary Education
MAFS.912.S-CP.1.1 – Worksheet 1

Calculator NOT permitted for this Standard

Name: _____ Date: ___/___/___

1. At Madison High School there are 325 students in the 10th grade. 147 students take a Spanish class, 109 students take a Photography class, and some take both as seen in the Venn diagram below. Shade the section of the Venn diagram showing students who take Spanish but not Photography.

10th Grade Students at Madison High School



2. At a track and field competition, Jonathon and Harley are juniors competing for first place in the long jump. Alonzo and Russell are seniors competing in the same event. The high jump also has four competitors including three juniors, Lewis, Corey and Abriel, and one senior, Dermot. Select all of the following that are included in the sample space for both events having a senior take first place.

☐ {Jonathon, Lewis}
☐ {Alonzo, Russell}
☐ {Harley, Dermot}
☐ {Alonzo, Abriel}
☐ {Russell, Dermot}
☐ {Alonzo, Dermot}

3. In a standard deck of cards, let *B* represent the set of black cards and let *F* represent the set of face cards. Which of the following statements describes the set ~*B* ∩*F*?
   A. The set of black, face cards
   B. The set of face cards that are not black.
   C. The set of black cards that are not face cards.
   D. The set of all black cards and face cards.

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4. Use the following information to complete the Venn diagram below. A survey of 250 people was taken to find out what types of snacks are purchased at a movie theater. 148 people bought popcorn, 31 people bought nachos and 112 people bought candy. Of these people, 11 bought popcorn and nachos, 76 bought popcorn and candy, 6 bought candy and nachos and 3 people purchased all three types of snacks.

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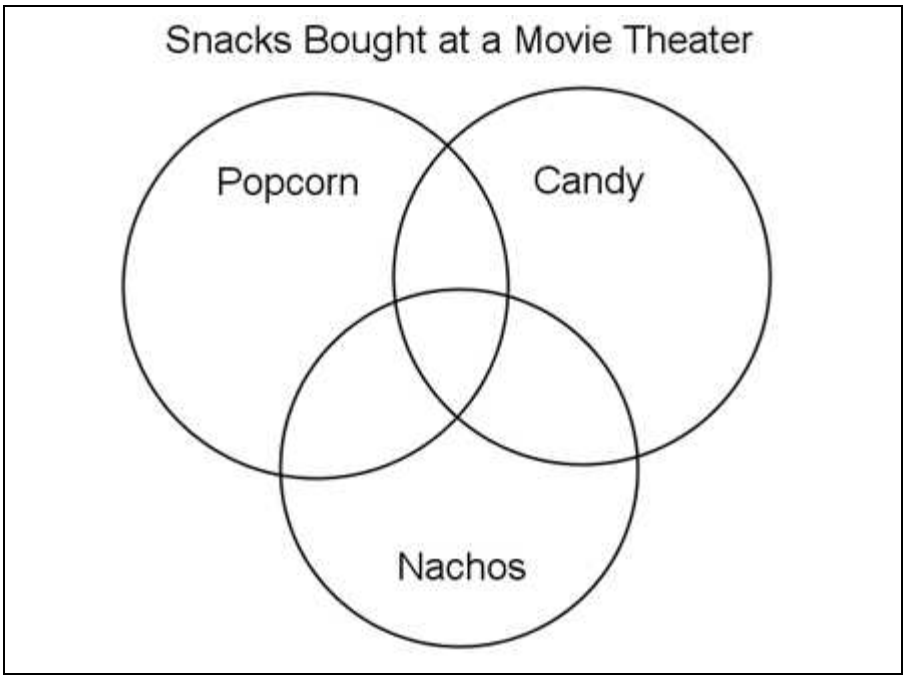
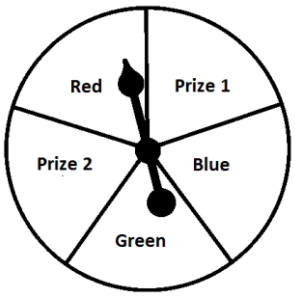
76
112
148
250



5. A game of chance is set up at a local fair where the player spins the wheel shown below and rolls a six sided number cube. The player wins if they land on a Prize section of the spinner AND roll a multiple of 3 on the number cube. List the sample space for a winning player.



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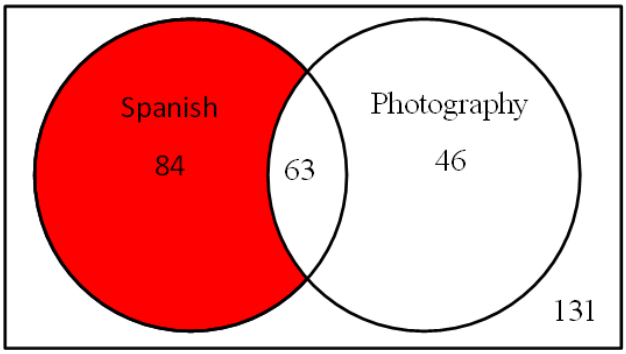

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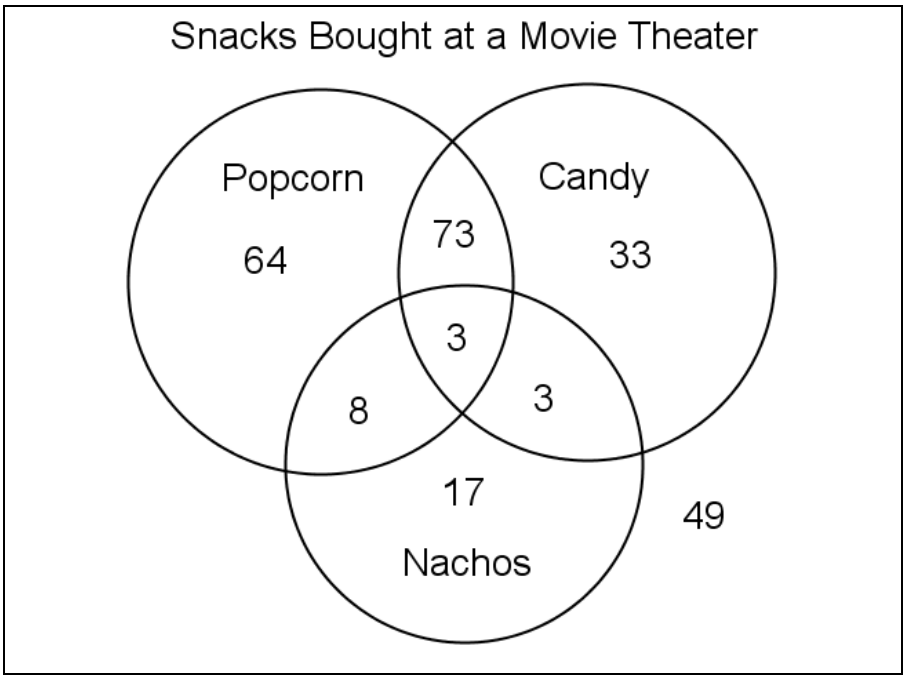

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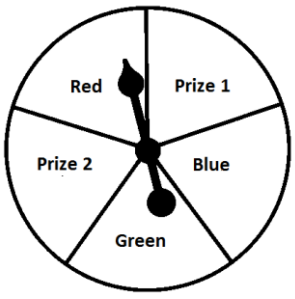

{Prize 1, 3; Prize 1, 6; Prize 2, 3; Prize 2, 6}

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