

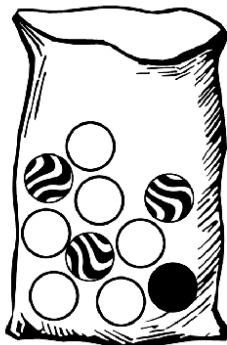
Name:

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LG 7.1

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_  
7.1: Calculate probabilities involving "OR" & "AND" and "NOT" using probability rules and models.

1. Use the image below to answer the following questions:



- Sancheezy picks up a marble, then PUTS IT BACK IN and selects another one. Explain why these two events are **independent**.
- Sancheezy picks one marble, then places it back and picks up another. What is the probability that he picks up the black marble the first time AND the second time?
- What is the probability that he picks up a white marble, then a swirly marble?
- What is the probability that he does NOT pick up a swirly marble then picks up a black marble?

2. Ms. Soto does a poll of families at MESA. She finds that 35% get a call home every week, 50% got a text home every week, and 20% got a call home AND text home every week.

- Are the events "calling home" and "texting home" mutually exclusive? Explain:
- Ms. Soto claims that the probability that a parent gets a text OR call home is 105% because  $.35 + .50 + .20 = 1.05$ . **Explain why she is incorrect! Then, find the real probability that a student gets a call home OR text home every week.**
- What is the probability that a person does not get a text or call home every week? Show your work: