

**PROBLEM-OF-THE-DAY: ALGEBRA 1****WEEK:** August 27 to August 31**DAY:** Wednesday

**RISD Objective:** Given a set of circumstances (e.g., marbles in a bag), students will calculate the probability of an event.

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**PROBLEM #8**

**Cafe-a-lot sells different types of coffee in their shop. The table below shows the coffee sales for a typical day. If a customer is chosen at random, what is the probability that she will choose either a latte or an espresso? Explain your work.**

<b>Coffee Type</b>	<b># of Cups Sold Per Day</b>
<b>Latte</b>	60
<b>Cafe-con-leche</b>	80
<b>Cappuccino</b>	40
<b>Espresso</b>	60

**MODEL SOLUTION #8**

To find probability, you take the number of favorable outcomes and divide by total number of outcomes. In this case, the favorable outcomes include both lattes and espressos, so we must add them together.  $60 + 60 = 120$ . To find the total number, I must add all the coffees together.  $60 + 80 + 40 + 60 = 240$ . So, my probability fraction is  $\frac{120}{240}$ , which reduces to the probability of  $\frac{1}{2}$ .