

## Running

You and your friend are out for a run. You are running at 9 miles per hour and your friend is walking at 3 miles per hour, along a 3-mile trail. Both of you keep a constant pace. However, whenever you are  $\frac{1}{4}$  of a mile ahead or reach the end of the trail, you turn around and run back until you meet up with your friend. Then, you repeat the process. How many miles do you end up running by the time your friend finishes the trail?



When you have solved this problem, go to Room 2055 to present your solution to the Master Teacher.