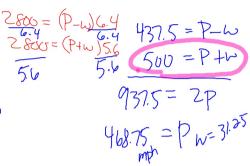
Suppose it takes you 6.4 hours to fly about 2800 miles from Miami to Seattle. You are flying into a headwind. The return trip takes only 5.6 hours because you are flying with a tailwind. Write and solve a system of equations to find the speed of the wind and the speed of the plane if there were no wind.

w = speed of the wind

SEA - MIA

Speed of the plane = 468.75 mph Speed of the wind = 32.25 mph



At the begining of the game you go to concession stand and buy 2 Cokes and 3 Hot Dogs for \$17.75. The game goes into overtime and you get hungry so you return to the concession stand and buy 1 Coke and 2 Hot Dogs for \$10.75. Write and solve a system of equations to find the price of a Coke and a Hot Dog.

On a canoe trip I paddled upstream (against the current) for 6 hours and traveled 15 miles. Later I paddled downstream (with the current) for 4 hours and traveled 34 miles.

Write and solve a system of equations to find the speed of the current and the speed that I can paddle if there were no current.

Up stream  $\frac{15}{6} = \frac{6(b-c)}{2.5} = \frac{b-c}{6}$ down stream  $\frac{5}{4} = \frac{4(b+c)}{4} = \frac{8.5}{6} = \frac{b+c}{6}$ Speed of the canoe = 5.5 mph
Speed of the current = 3 mph  $\frac{11}{6} = \frac{b}{6} = \frac{b-c}{6}$ 

A cake is taken out of the oven at 325° F. At the same time an ice cube tray (32° F) is taken out of the freezer. The cake cools down 13° F per minute. The ice warms up 2° F per minute. Write and solve a system of equations to find the number of minutes until they are at the same temperature. Round to the nearest hundredth.

$$325 - 13m = T$$
 $32 + 2m = T$ 
 $325 - 13m = 32 + 2m$ 
 $m = 19.53$