The original problem is below. Since the inlet pipe can fill the pool in 5 hours, it will fill 1/5 of the pool in 1 hour. Likewise the outlet pipe will empty 1/8 of the pool in 1 hour. With both open the pool will fill 1/5 – 1/8 = 3/40 in 1 hour. Thus it will take 40/3 hours = 13 1/3 hours = 13 hours 20 minutes to fill the pool.

A Timely Problem

An inlet pipe can fill Dominic's pool in 5 hours, while an outlet pipe can empty it in 8 hours. In his haste to watch television, Dominic left both pipes open. If the pool was empty when he started, how long did it take to fill the pool?