You probably set up a rate incorrectly. The first potter's rate is $\frac{15}{5}$ or 3 mugs per hour. The second potter's rate is $\frac{12}{3}$ or 4 mugs per hour. Find their combined rate. Find a fraction that represents the rate for the new job in mugs per hour. Set these two numbers equal and solve the equation. The correct answer is 9 hours.