

1 minute and 44 seconds = 104 seconds  
3 minutes 32 seconds = 212 seconds  
2 minutes 19 seconds = 139 seconds

Form the equation.

$$\frac{x}{104} - \frac{x}{212} + \frac{x}{139} = 1$$

$x$  - time required to increase the population of one person.  $\frac{x}{104}$  - increase the population by one birth every 1 minute and 44 seconds.  $\frac{x}{212}$  - reduce the population by one death every 3 minutes 32 seconds.  $\frac{x}{139}$  - increase the population by net gain of one international migration every 2 minutes 19 seconds. "=1" because we are looking for overall population increase of one person.

Solve equation.

$$\frac{212 * 139x - 104 * 139x + 104 * 212x}{104 * 212 * 139} = 1$$

$$\frac{37060x}{3064672} = 1$$

$$x = \frac{3064672}{37060} \approx 82,6948 \approx 83 \text{ seconds} = 1 \text{ minute } 23 \text{ seconds}$$