

Nashville Population

The growth rate for Nashville was approximately a 2% increase between July 1, 2015 and July 1, 2016. In 2016, the population of the Nashville region was measured at approximately 1,865,298 people.

What is an equation to describe this growth if x stands for the number of years since 2015?

$$\frac{1,865,298}{1.02} \approx 1,828,723$$

$$y = 1,828,723 (1.02)^x$$

$x = \text{years since 2015}$

On average, how many people per day moved to Nashville between 2015-2016?

$$(0, 1,828,723) (1, 1,865,298)$$

$$\frac{1,865,298 - 1,828,723}{1} = \frac{36,575}{1}$$

≈ 100 a day

What is the approximate current Nashville population (if we measured July 1, 2019) if the growth has continued at the same rate?

$$y = 1,828,723 (1.02)^4$$

$\approx 1,979,468$ people

How many people will there be in Nashville in 2025 if this type of growth continues?

$$y = 1,828,723 (1.02)^{10}$$

$2,229,9203$ people

Why do you think Nashville's population is increasing at this rate? Why are people moving to Nashville? Explain in complete sentences.

Nashville is a city that doesn't feel too big or too small. It has been deemed "Music City" which attracts musicians + music lovers. It also has many job opportunities + social opportunities.

Nashville Housing Market

From 1993 to 1997, Nashville property values increased by 33% (an average of 8.25% per year). Property values were expected to grow at about the same rate or more between the years 2013 and 2017.

Let's say Mia bought a house for \$100,000 in 1995, and her neighborhood property values have increased in value at 8.25% every year since then.

Write an equation to describe the situation.

$$y = 100,000(1.0825)^x$$

$x = \text{years since 1995}$

What would her house be currently worth?

$$y = 100,000(1.0825)^{24}$$

$\$670,300.77$

Home appreciation has slowed nearly every month since last fall (2018), following year-over-year double-digit growth from 2016 to mid-2018.

Nashville area home price appreciation has slowed steadily since the fall, with 8.9 percent increases over the year before in both October and November 2018, followed by 8.5 percent in December and 7.9 percent in January. In March (2019), price growth mellowed to roughly the same rate as the national average of 6.6 percent. Average home values grew by 6.8 percent in March, compared to the year prior when prices jumped 11.2 percent over March 2017.

"Nashville is one of the many places where prices were growing at an unsustainably high rate," said Zillow economist Jeff Tucker. "I do think that the previous rates of growth in Nashville were really unsustainable. That was sort of pulling things out of the reach of affordability for a lot of people."

-Tennessean