

A Town's Population Went From 25,800 To 42,600 In 15 Years. What Was The Percent Of Change?ROUND TO

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Understanding population growth and calculating the percentage increase over a specific period are vital skills for demographers, city planners, investors, and residents. In this article, we explore the details behind a town's population increase from 25,800 to 42,600 over 15 years. We will break down the concepts involved, provide step-by-step calculations, and discuss the implications of such growth. Whether you're a student learning about percentage calculations or a local official assessing growth trends, this guide will help clarify the process and offer insights into interpreting population data.

What Does Population Growth Mean?

Population growth refers to the change in the number of inhabitants in a specific area over a period of time. It can be positive (growth), negative (decline), or stagnant. Analyzing these changes helps communities plan for infrastructure, services, and economic development.

Key factors affecting population change include:

- Natural increase (births minus deaths)
- Migration (people moving in or out)
- Economic opportunities
- Quality of life factors
- Policy changes and incentives

Understanding Percent Change in Population

Percent change is a way to express the relative increase or decrease between two quantities. It allows for easier comparison across different data points or regions.

The basic formula for percent change is:

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Percent Change = [(New Value - Old Value) / Old Value] × 100
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Applying this to population data:

- Old Population: the initial number of residents
- New Population: the current or final number of residents

In our case:

- Old Population = 25,800
- New Population = 42,600

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Calculating the Population Percent Increase

Let's proceed step-by-step to determine the percent increase from 25,800 to 42,600.

Step 1: Find the Difference in Population

Calculate how many more residents the town gained:

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Difference = 42,600 - 25,800 = 16,800
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Step 2: Divide the Difference by the Original Population

Determine the ratio of growth relative to the initial population:

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Ratio = 16,800 / 25,800 ≈ 0.65116
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Step 3: Convert to Percentage

Multiply by 100 to get the percent increase:

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Percent Increase =  $0.65116 \times 100 \approx 65.12\%$

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Therefore, the town experienced approximately a 65.12% increase in population over 15 years.

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Rounding the Result

In many contexts, especially for reporting or simplified understanding, rounding to the nearest whole number makes the data more digestible.

- Rounded Percent Increase: 65%

This figure indicates that the town's population grew by about 65 percent over the 15-year span.

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Implications of Population Growth

Understanding this percentage increase has numerous practical implications:

1. **Urban Planning:** A significant growth rate necessitates expansion of infrastructure such as roads, schools, and healthcare facilities.
2. **Economic Development:** Increased population can boost local economies, attract businesses, and create job opportunities.
3. **Environmental Impact:** Population growth may lead to environmental challenges, including increased pollution and resource consumption.
4. **Housing Market:** Rising population often results in increased demand for housing, affecting property prices and availability.
5. **Public Services:** Demand for public services like transportation, policing, and sanitation rises with population growth.

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Additional Factors to Consider

While calculating the percent change provides valuable quantitative data, understanding the qualitative factors influencing growth is equally important.

1. Migration Trends

- Are people moving into the town for employment or lifestyle reasons?
- Has there been an influx of new residents due to affordable living costs?

2. Birth and Death Rates

- Is the natural increase contributing significantly to growth?
- Are there health initiatives or demographic shifts affecting these rates?

3. Policy Changes

- Have local policies or incentives attracted new residents?
- Are zoning laws or development projects influencing population trends?

Real-World Applications of Population Change Percentages

Understanding percent change is critical in various sectors:

- Government Planning: Allocating budgets based on growth projections.
- Real Estate: Developers assessing market potential.
- Businesses: Identifying markets for expansion.
- Academic Research: Studying demographic shifts and their causes.

Summary and Key Takeaways

- The town's population grew from 25,800 to 42,600 over 15 years.
- The population increase equates to approximately a 65% rise.

- Calculations involve subtracting the initial population from the final, dividing by the initial, and multiplying by 100.
- Rounded to the nearest whole number, the percent increase is 65%.
- Population growth impacts infrastructure, economy, environment, and community planning.
- Analyzing both quantitative data and qualitative factors provides a comprehensive understanding of growth trends.

Conclusion

Tracking and calculating population changes is essential for effective decision-making in urban development, economic planning, and community services. In our example, a 65% increase over 15 years reflects a significant demographic shift, likely driven by various social, economic, and policy factors. Recognizing and interpreting these figures help stakeholders prepare for future challenges and opportunities, ensuring sustainable growth and community well-being.

Remember: Always verify your data and calculations, and consider both numerical and contextual factors when analyzing population trends.

Frequently Asked Questions

What is the percent of change in the town's population over 15 years?

The percent of change is approximately 65.89%.

How do you calculate the percent of change in population?

Subtract the original population from the new population, divide by the original population, then multiply by 100 to get the percent change.

What is the formula for percent change used in this problem?

Percent Change = $\frac{(\text{New Population} - \text{Original Population})}{\text{Original Population}} \times 100$.

What is the rounded percent of change from 25,800 to 42,600?

Approximately 65.89% when rounded to two decimal places.

Why is it important to round the percent change to a specific decimal place?

Rounding provides a clear and concise figure, making the data easier to interpret and compare.

Additional Resources

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In the realm of demographic studies and urban development, understanding population growth is essential for policymakers, urban planners, and residents alike. Recently, a notable case captured attention: a town experienced a remarkable shift in population over a span of 15 years, increasing from 25,800 residents to 42,600. This significant change prompts an important question: what was the percentage of this population growth? Calculating this figure provides insight into the town's development trajectory, economic vitality, and potential future trends. This article explores the process of determining the percent change, offers a detailed breakdown of the calculation, and discusses the implications of such growth on the town's infrastructure, economy, and community life.

Understanding Population Change: The Basics

Population change is a fundamental indicator used by demographers and urban planners to gauge the health and attractiveness of a community. It encompasses two primary components:

- Natural Increase: The difference between births and deaths within a population.
- Net Migration: The difference between people moving into and out of the area.

While these factors influence overall population change, the focus here is on the numerical growth from one year to another, expressed as a percentage increase over a 15-year period.

Why Calculate Percent Change?

Calculating the percent change offers a standardized way to measure relative

growth, allowing comparisons between different towns or regions regardless of initial size. It also helps to interpret whether the growth is modest, moderate, or rapid, which in turn informs resource allocation, infrastructure development, and policy decisions.

Calculating the Percent Change: Step-by-Step

The core formula used for calculating percent change is straightforward:

Percent Change = $[(\text{New Population} - \text{Original Population}) / \text{Original Population}] \times 100$

Applying this to the town's data:

- Original Population (15 years ago): 25,800
- New Population (present): 42,600

Step 1: Subtract the original population from the new population

$$42,600 - 25,800 = 16,800$$

Step 2: Divide the change by the original population

$$16,800 / 25,800 \approx 0.65116$$

Step 3: Convert to a percentage by multiplying by 100

$$0.65116 \times 100 \approx 65.12\%$$

Step 4: Round to the nearest whole number

Rounding 65.12% to the nearest whole number yields 65%.

Final Result: The town's population increased by approximately 65% over 15 years.

Interpreting the Results

Achieving a 65% increase in population over a decade and a half is a substantial demographic shift. Such growth indicates several underlying dynamics:

Economic Opportunities and Urban Development

A rise of this magnitude often correlates with economic expansion, such as new industries, business developments, or employment opportunities attracting

residents from neighboring areas or even farther regions.

Infrastructure and Public Services

Growth of this scale necessitates upgrades in infrastructure—roads, schools, healthcare facilities, and utilities—to accommodate the expanding population. Planning becomes crucial to ensure sustainable development.

Housing Market Dynamics

An influx of residents usually drives demand for housing, influencing property values, rental markets, and urban density. It can also prompt new housing projects and urban renewal initiatives.

Community and Cultural Changes

Population increases can diversify the community, introduce new cultural influences, and reshape local identity. These changes can be positive but may also lead to challenges related to social cohesion and resource distribution.

Limitations of Percent Change Calculations

While percent change provides valuable insights, it is important to remember:

- It does not specify the exact number of new residents, only the relative change.
- It assumes a linear growth model, which might not capture fluctuations within the period.
- External factors like policy changes, economic cycles, or natural events can influence growth rates but are not reflected in the percentage alone.

Implications for the Future

Understanding this 65% growth projection offers a foundation for strategic planning:

- **Urban Planning:** Authorities must anticipate continued growth, possibly projecting future population sizes based on current trends.
- **Resource Management:** Ensuring sustainable water, energy, and waste management systems to support a larger population.
- **Economic Development:** Leveraging growth to attract new businesses, improve services, and enhance quality of life.
- **Environmental Impact:** Balancing development with environmental conservation to maintain ecological health.

Conclusion

The case of this town's population expanding from 25,800 to 42,600 over 15 years exemplifies significant demographic change. By calculating the percent increase—approximately 65%—stakeholders can better understand the scope of growth and plan accordingly. Such a substantial rise underscores the importance of strategic development, resource management, and community engagement to ensure that growth translates into sustainable prosperity. As towns and cities continue to evolve, these calculations remain a vital tool for informed decision-making, guiding communities toward a resilient and thriving future.

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