SHOTS FOR TOTS

# City Data Worksheet

Use research resources to find a U.S. city with a population between 600,000 and 700,000 people. You can get statistics from a recent atlas or from internet sources such as:

http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml or http://www.baruch.cuny.edu/nycdata/world_cities/largest_cities-usa.htm.

Try to use reliable sources from .gov or .edu sites.

City: (Sample, answers will vary) Denver, Colorado

Estimated Population in 20____ (provide year): 634,265

About $\frac{1}{10}$ of the population is estimated to be 10 years old or younger. Complete the table to show the estimated number of children ages 0 to 10 years old.

## Population Estimates

| | **Population** | **$\frac{1}{10}$ of Population (number of children age 0 to 10)** Round your answer to the nearest whole number |
|---|---|---|
| Total population | 634,265 | 63,427 |
| Round to the nearest 10 | 634,270 | 63,427 |
| Round to the nearest 100 | 634,300 | 63,430 |
| Round to the nearest 1,000 | 634,000 | 63,400 |
| Round to the nearest 10,000 | 630,000 | 63,000 |
| Round to the nearest 100,000 | 600,000 | 60,000 |


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You will use one of your estimates to calculate the number of children 10 years old or younger who are eligible to receive vaccines from the free clinics. Which estimate will be the most valuable for you to use? Why do you think this estimate is the most valuable?

Rounding the city's population to the nearest 1000 gives the number of children rounded to the nearest 100. This is the most reliable figure because, although it is an estimate, it is not too far from the city's population. It is also not lower than the city's population. If you use a more exact population, the number of children may even be a fraction that would need to be rounded to the nearest whole number. If you use a population rounded to a place value higher than 1000, the number of children in the estimate drops significantly and might make other calculations less accurate. This ultimately means that there will not be enough vaccine to take care of all the children's needs.

According to United States Census information, the average poverty rate nationwide is $\frac{22}{100}$. Use this fraction to calculate the approximate number of children living in families in poverty.

Simplify the fraction, if possible: $\frac{11}{50}$

Using the rounded population figure for your city, find the number of children living in poverty. Multiply the number by your simplified fraction.

$63{,}400 \times 11/50 = 13{,}948$

Briefly explain the process you used to find this number.

I rounded the city's population to the nearest 1000, then moved the decimal point to the left to calculate 1/10 of that number. I multiplied 63,400 by 11/50 because the poverty rate was 11/50. The answer is an estimate of the number of children who might be living in poverty in this city.

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