Calculate the following rates using the information provided.

1. The total death in County Z last year was 6,092. The population of County Z last year was 524,263. What was the crude death rate? Use 100,000 as the multiplier. Round to the nearest whole number.

$$\frac{6092}{524243} \times 100000 = 1162$$

2. There were 4,953 deaths from neoplasms in City B during the past year. The year-end population was 3,495,678. What was the specific cancer death rate for last year? Use 100,000 as the multiplier. Round to the nearest whole number.

$$\frac{4953}{3495678} \times 100000 = 142$$

3. The population of the US in 2000 was 99,421,906. The number of deaths from heart disease in the US in 2000 was 710,760. The total number of deaths in the US in 2000 was 2,403,351.

a. Calculate the percentage (%) of heart disease deaths for the US in 2000. Round to the nearest whole number.

$$\frac{710760}{2403351} \times 100 = 30\%$$

b. Calculate the rate of heart disease deaths in the US in 2000 for the US. Use 100,000 as the multiplier. Round to the nearest whole number.

$$\frac{710760}{99421906} \times 100000 = 715$$

4. In Illinois in 2000, the population was 12,419,293. The number of Salmonella cases in 2000 was 1,502 in Illinois. Calculate the incidence rate for Salmonella for Illinois in 2000. Use 100,000 as the multiplier. Round to the nearest whole number.

$$\frac{1502}{12419293} \times 100000 = 12$$

5. There were 45,238 neonatal deaths out of 5,672,000 live births in City F. Calculate the neonatal mortality (death) rate. Use 1,000 as the multiplier. Round to the nearest whole number.

$$\frac{45238}{5672000} \times 1000 = 8$$

6. The population in Sangamon county in 2000 was 188,951.

a. The number of live births in Sangamon County in 2000 was 2,646. Figure the Live Birth rate for Sangamon country for 2000. Use 1,000 as the multiplier. Round to the nearest whole number.

$$\frac{2646}{188951} \times 1000 = 14$$

b. The number of infant deaths in Sangamon County in 2000 was 18. Figure the infant mortality rate for Sangamon country for 2000. Use 1,000 as the multiplier. Round to the nearest whole number.

$$\frac{18}{2646} \times 1000 = 7$$

7. A city has a population of 250,000. Of these, 10,000 have disease X, which is incurable. There are 1,000 new cases and 400 deaths each year from this disease. There are 2,500 deaths per year from all causes. What is the prevalence rate based on a multiplier 100,000. Round to the nearest whole number.

$$\frac{10,000}{250,000} \times 100000 = 4000$$