

Epidemiology Practice Questions

1. County S has a population of 453,957. There have been 564 cases of Legionnaire's Disease reported in the last month. Using 100,000 as the multiplier, what is the **incidence rate** for this county? Round to the nearest whole number.

$$\frac{564}{453,957} = 0.0012424 \times 100,000 = 124.24 \sim \boxed{124 \text{ per } 100,000}$$

2. City T has a population of 123,987. The number of live births last year was 4,560. Using 1,000 as the multiplier, what is the **birth rate** for last year? Round to the nearest whole number.

$$\frac{4,560}{123,987} = 0.036778 \times 1,000 = 36.778 \sim \boxed{37 \text{ per } 1,000}$$

3. The total number of deaths in County X last year was 45. The population of County X was 23,788. Using 10,000 as the multiplier, what was the **crude death rate**? Round to the nearest whole number.

$$\frac{45}{23,788} = 0.0018917 \times 10,000 = 18.917 \sim \boxed{19 \text{ per } 10,000}$$

4. City A has had 150 deaths from influenza in 2020. The population for City A in 2022 was 51,483. Using 10,000 as the multiplier, what is the **specific death rate** from influenza? Round to the nearest whole number.

$$\frac{150}{51,483} = 0.0029135 \times 10,000 = 29.135 \sim \boxed{29 \text{ per } 10,000}$$

5. City K had 4,562 neonatal deaths in 2018 out of 50,354 live births. Using 1,000 as the multiplier, what is the **neonatal mortality rate**? Round to the nearest whole number.

$$\frac{4,562}{50,354} = 0.0905985 \times 1,000 = 90.5985 \sim \boxed{91 \text{ per } 1,000}$$