**Per Capita**

1) The National Oceanic and Atmospheric Administration (NOAA) reported that there are 17.8 million feet of Atlantic coastline in the state of North Carolina. If the population of North Caroline is approximately 9.5 million, find the number of feet of coastline per capita in North Carolina.

2) According to the NOAA, the state of Oregon has just over 6 million feet of Pacific coastline. If the population of Oregon is approximately 3.8 million people, find the number of feet of coastline per capita in Oregon.

3) Compare your answers above using a few meaningful sentences.

**Per Capita and Scales**

Let’s look at another scenario. Below are the number of K-12 regular (non-private, not online) school districts for several states in the Midwest in the 2014-2015 school year, using data from the NCES.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **State** | **Number of K-12 Regular School Districts** | **Population (in millions)** | **School Districts Per Capita** | **In Scientific Notation** |
| **Indiana** | 295 | 6.6 |  |  |
| **Illinois** | 859 | 12.9 |  |  |
| **Kentucky** | 173 | 4.4 |  |  |
| **Michigan** | 548 | 9.9 |  |  |

1) Complete the table above by calculating the number of school districts per capita and writing your answers in both standard form and Scientific Notation.

2) Scaling up: Writing the number of school districts for Indiana as …

a) “ per 10,000”:

b) “per 100,000”:

c) “per 1,000,000”:

d) Which of the above options would be an appropriate scale to use for this example? Explain your reasoning.

3) Which state has the most school districts per capita? Which state has the least?

**Proportions**

1) If 14 bags of mulch cost $51.10, how much would 49 bags of mulch cost?

2) To determine the number of fish in a popular fishing lake, conservation officers catch and tag 200 fish, throwing them back in the lake. Weeks later, they catch 82 fish and discover 8 are tagged. Use proportional reasoning to estimate the number of fish in the lake.