Problem: Team Rocket is at it again! This time they are looking to terrorize the city of San Francisco, and aim to make the trek through the “crookedest street in the world” (Lombard Street) to steal a treasure contained in Coit Tower. Legend has it, the tower is completely filled with Poké Balls, enough Poké Balls for Team Rocket to amass an army of Pokémon! Fortunately, a slumbering Pokémon is known to sleep at the bottom of Lombard St and block the entrance to Coit Tower entirely. If Team Rocket determines how to wake the sleeping giant and successfully steals the cache of Poké Balls that fills Coit Tower, about how many Poké Balls would they walk away with? Describe each step in your thought process.

Solution:

To show my solution, I will describe each step below

1) First, we need to find out the total height and diameter of both Coit Tower and a single PokeBall.
    a) Coit Tower according to this article is 32 feet in diameter and the occupied sections are 178 feet according to this website.
    b) A PokeBall according to this article is 2.50 inches and circumference of 7.85 inches.
    c) Note: We’ll change the conversion later in the solution.
2) Once we get the information we continue to find the radius of Coit Tower and a Pokeball
    a) Since the radius is the half of a diameter we simply cut the diameter for each of the items in half.
        i) So Coit Tower radius is 16 feet
        ii) PokeBall radius is 1.25 inches
3) The radius is an important part for us to find the volume of both Coit Tower and a Pokeball.
    a) Since Coit Tower is a cylinder shape, we use the following formula to find it’s volume: $\pi * r^2 * h$. Which is pretty much pie times the square root of radius and times by the height. So, in the end, we get the radius to be the following: $\pi * 16^2 * 178 = 143,156$ cubic feet.
    b) For the PokeBall, we use the following formula for a sphere to find it’s volume: $V = \frac{4}{3} * \pi * r^3$. Using this, we get the volume for the sphere to be: $\frac{4}{3} * \pi * 1.25^3 = 8.3$ cubic inches.

4) Now it's time for the most important to determine the number of pokballs in Coit Tower, which is to convert the 8.3 cubic inches to cubic feet.
    a) In order to achieve this, we simply divide 8.3 by 1728 to get .00474537 cubic feet.
5) Lastly, we to find the total of pokeballs we do the following:
    a) Divide 143,156 by .00474537 to get the following:
    $$143156 / .00474537 = 30,167,510$$
6) So the number of Poke balls Team Rocket can take from Coit Tower is 30,167,510 Poke balls.
7) P.S Snorlax can be only be awakened either if it's hungry or a Poke Flute.