Shock Chlorination Worksheet

Water System Name: _____

Well disinfection Casing Diameter (in) _____

Total Well Depth _____ ft
minus Static Water Level _____ ft
= Well water depth _____ ft

Gallons in well = Depth of water (ft) X Gallons per foot of depth (based on table with casing diameter)

= _____ X _____ = _____ gallons of water to be treated in well

How much bleach product would you need to add to the well to achieve at least 50 ppm?
(Use excel form or this formula)

Cups of bleach product = $\frac{\text{(target concntr., ppm)(water vol., gal)(16 cups/gal)}}{\text{(bleach concentration as \%)(10,000 ppm/\%)}}$

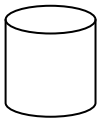
= $\frac{\text{50 ppm x \_\_\_\_ gals in well x 16}}{\text{\_\_\_ \% bleach product X 10,000}}$

= _____ cups

(Also, remember the rule of thumb of approximately 1 cup of 5% bleach per 100 gallons to get 50 ppm.)

Storage Tank Same question, **to achieve 50 ppm in the storage tank you would need….**

Gallons to be disinfected in tank: _____



Gallons of bleach product = $\frac{\text{50 ppm x \_\_\_\_\_ gals in tank}}{\text{\_\_\_ \% bleach product X 10,000}}$

= _____ gallons bleach product

(Notice we skipped the gallons-to-cups conversion this time, because a storage tank usually has a large enough volume to use gallons units for the bleach product)

Mixing is important – recirculate in tank!

Distribution System **Disinfect pipes to achieve 50 ppm…**

1. Length of pipe (L) from point of disinfection to first user: _____ feet
2. Diameter of pipe (D) between point of disinfection and first user: _____ inches
3. Volume of pipe (V) = (L X D2) ÷ 24.5 or (L X D X D) ÷ 24.5 or
   (Line 1 X Line 2 X Line 2) ÷ 24.5 = _____ gallons
4. Repeat calculations if additional lengths of pipe
   Volume of pipe (V_2) = (L_2 X D_2 X D_2) ÷ 24.5 = _____ gallons
5. Total Volume of pipes (V_{Total}) = V_1 + V_2 + . . . = _____ gallons
6. Gallons of bleach product = $\frac{\text{50 ppm x \_\_\_\_\_ gals in tank}}{\text{\_\_\_ \% bleach product X 10,000}}$, or multiply by 16 to get _____ cups