

## Cleaning Questions: Solutions



1. Orange and Grey want to mix a few bottles of 70% cleaning solution. Calculate how many fluid ounces of alcohol are needed in the final solution, and the amount of 91% alcohol they must add to reach that amount. Round to the nearest hundredth.

Bottle Size (fl oz).	Alcohol Required (fl oz)	91% solution (fl oz.)
10	7	7.692
15	10.5	11.538
25	17.5	19.231
40	28	30.769

2. In order to properly clean their paws, Orange and Grey are making paw sanitizer. The Cat Disease Control (CDC) has issued statements saying all sanitizers must contain over 60% alcohol to be effective. So, they will be making alcohol based hand sanitizers with their 91% alcohol solution and aloe vera gel. Fill out the table to find out how much of each supply they will need.

Bottle size (fl oz).	Alcohol Concentration (%)	91% solution (fl oz)	Aloe Gel (fl oz).
10	60	6.593	3.407
25	60	16.483	8.518
10	75	8.242	1.758
25	75	20.604	4.396
30	80	26.374	3.626

\*Due to the nature of chemical bonds, these numbers may not be 100% accurate. However, they are certainly precise enough for any ordinary usage.

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