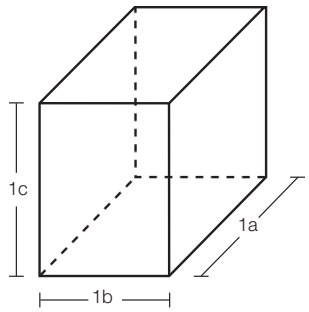
G. Room Clearance Time Calculation Worksheet

CONVERSION RATE CALCULATION WORKSHEET

Room or Booth # _____

1. Calculate Room Volume



1a. Room Length	**1a.** _____ ft
1b. Room Width	**1b.** _____ ft
1c. Room Height	**1c.** _____ ft
1d. 1a x 1b x 1c = volume	**1d.** _____ ft^3

2. Calculate Air Changes Per Hour (ACH)

2a. Measured exhaust airflow rate	**2a.** _____ CFM
2b. = 2a x 60 minutes	**2b.** _____ ft^3 per hr
2c. = 2b ÷ 1d	**2c.** _____ ACH

3. Calculate Room Clearance Time

3a. Find the Uncorrected Clearance Time — **3a.** _____ min.

Using Table 1 of the CDC Guidelines (see next page), follow the first column down until the ACH value on line 2c is found. A removal efficiency of >99% is preferred; for 99% efficiency follow this row horizontally to the second column, ideally the value in the third column (99.9% removal efficiency) should be used. Record this value (the number of minutes).

This is the amount of time that should elapse before staff or other patients enter a sputum induction area (booth, hood, or room) after sputum has been induced on a person with suspected or known infectious TB and the patient has left. Table 2 of the CDC Guidelines should be consulted to ensure that your calculated ACH is appropriate for the type of setting you are working in.

TABLE 1. FROM THE CDC GUIDELINES

Air changes per hour (ACH) and time required for removal efficiencies of 99% and 99.9% of airborne contaminants*

ACH	99%	99.9%
	MINUTES REQUIRED FOR REMOVAL EFFICIENCY†	
2	138	207
4	69	104
6	46	69
12	23	35
15	18	28
20	14	21
50	6	8
400	<1	1

* This table can be used to estimate the time necessary to clear the air of airborne *Mycobacterium tuberculosis* after the source patient leaves the area or when aerosol-producing procedures are complete.

† Time in minutes to reduce the airborne concentration by 99% or 99.9%.