Preliminaries

- Pick one person at your table to be the “Recorder.” You have 15 seconds.
- The Recorder
  - Enter your name in the first location.
  - Write down the names of the other students on the worksheet.
- Other
  - You will turn these papers in at the end of the day so be neat.

Task 1

- Part A. As a group, estimate the floor area (ft²) of this room to 1-2 significant figures (SF).
  - You must come up with only 1 number.
  - You must remain seated.
  - You have 1 minute to decide and record your answer.
- Part B. As a group, estimate the volume (ft³) of this room to 1-2 SF.
  - You must come up with only 1 number.
  - You must remain seated.
  - You have 1 minute to decide and record your answer.

Task 1 Continued

- Volume Results

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Table 5</th>
<th>Table 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,000</td>
<td>21,000</td>
<td>9,600</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 7</th>
<th>Table 8</th>
<th>Table 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,600</td>
<td>20,000</td>
<td>26,000</td>
</tr>
</tbody>
</table>

  Record these results on your work sheet.

Task 2

- Part A. As a group and using your assigned measuring device, measure the length, width, and height of this room.
  - You must come up with only 1 number for each measurement.
  - You have 10 minutes to measure and record your answers.
- Part B. Calculate the floor area (ft²) of this room.
  - You must come up with only 1 number.
  - How many SF are allowable?
- Part C. Calculate the volume (ft³) of this room.
  - You must come up with only 1 number.
  - How many SF are allowable?

Task 2 Continued

- Volume Results

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,000</td>
<td>20,000</td>
<td>19,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Table 5</th>
<th>Table 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,000</td>
<td>19,000</td>
<td>19,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 7</th>
<th>Table 8</th>
<th>Table 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
</tbody>
</table>

  Record these results on your work sheet.
### Task 2 Continued

- **Part D. Calculate:**

<table>
<thead>
<tr>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,000 ft³</td>
<td>19,000 ft³</td>
</tr>
<tr>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mode</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>390 ft³</td>
<td>410 ft³ sample</td>
</tr>
</tbody>
</table>

### Comparison

<table>
<thead>
<tr>
<th>Task 1</th>
<th>Task 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>Mean</td>
</tr>
<tr>
<td>19,000 ft³</td>
<td>19,000 ft³</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Coefficient of Variation</td>
<td>Coefficient of Variation</td>
</tr>
<tr>
<td>0.34</td>
<td>0.021</td>
</tr>
</tbody>
</table>

### Task 2 Continued

- **Part E. Convert the mean volume calculation to:**

  - **Liters – Tables 1-3**
  - **Gallons – Tables 4-6, 1 gallon = 231 in³**
  - **Cubic meters – Tables 7-9**

<table>
<thead>
<tr>
<th>Tables 1-3</th>
<th>Tables 4-6</th>
<th>Tables 7-9</th>
</tr>
</thead>
<tbody>
<tr>
<td>5% 0,000 L</td>
<td>5% 0,000 L</td>
<td>5% 0,000 L</td>
</tr>
<tr>
<td>5% 0,000 L</td>
<td>5% 0,000 L</td>
<td>5% 0,000 L</td>
</tr>
</tbody>
</table>

### Task 3

- **On the back of the worksheet come up with a list of at least three reasons I would need to know the area or the volume of this room.**
  - For each reason, decide the required level of accuracy (SF?).
  - For each reason, discuss whether or not your assigned measuring device can produce the required accuracy.
  - If your measuring device can not produce the required level of accuracy, discuss what measuring device(s) would.
List the names of the students at your table:

Graham Langford
The Recorder
Chris Linzy

Task 1:
Record your group’s answer to Part A here: 1500 ft^2

Record your group’s answer to Part B here: 15000 ft^3

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,000 ft^3</td>
<td>20,000 ft^3</td>
<td>20,000 ft^3</td>
</tr>
<tr>
<td>Table 4</td>
<td>Table 5</td>
<td>Table 6</td>
</tr>
<tr>
<td>27,000</td>
<td>21,000</td>
<td>8600</td>
</tr>
<tr>
<td>Table 7</td>
<td>Table 8</td>
<td>Table 9</td>
</tr>
<tr>
<td>9600</td>
<td>20,000</td>
<td>26,000</td>
</tr>
</tbody>
</table>

Record your group’s answer to Part C here:
Mean: 19,000
Median: 20,000
Mode: 6,400
Standard Deviation: 2,400

Task 2:
Record your group’s assigned measuring device here: Straight-Line Sonic Laser Tape - 50 ft!

Record your group’s answer to Part A here: 46.6 ft, 54.5 ft, 12.38 ft, 34.1 ft, 3.11 ft, 10.2 ft.

Record your group’s answer to Part B here:

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,000 ft^3</td>
<td>19,000 ft^3</td>
<td>3 SF</td>
</tr>
<tr>
<td>Table 4</td>
<td>Table 5</td>
<td>Table 6</td>
</tr>
<tr>
<td>18,900 ft^3</td>
<td>18,400 ft^3</td>
<td>3 SF</td>
</tr>
<tr>
<td>Table 7</td>
<td>Table 8</td>
<td>Table 9</td>
</tr>
<tr>
<td>19,000 ft^2</td>
<td>19,000 ft^3</td>
<td>2 SF</td>
</tr>
</tbody>
</table>

Record your group’s answer to Part D here:
Mean: 19,000 ft^3
Median: 19,000 ft^3
Mode: 410
Standard Deviation

Record your group’s answer to Part E here: 5.38 x 10^5 L
540,000 L
4,100 gal
540,000 L

Task 3: On Back
Climate Control. (2 SF)
Our device is accurate as it gives a measurement of two SF - sufficient for air distribution.
To set up an experiment.

To close off the room and turn into a water tank.

To resurface the floors. (3 SF)
Our device is accurate in giving very high SF surface area.

Human Capacity / Factors of Room (2 SF)
Our device is accurate as we need only a general number to guess for the human factors.
EF 157 – Fall 2006 – Problem Session 1-2 - Table 2

List the names of the students at your table:

Lauren Johnson    Lizzy Mairon
The Recorder       
Rose Dortch        Caroline Anderson

**Task 1:**
Record your group’s answer to Part A here: 2000 ft²

Record your group’s answer to Part B here: 20000 ft³

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>15000 ft³</td>
<td>20000 ft³</td>
<td>20000 ft³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Table 5</th>
<th>Table 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>27000 ft³</td>
<td>21000 ft³</td>
<td>81000 ft³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 7</th>
<th>Table 8</th>
<th>Table 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>9000 ft³</td>
<td>20000 ft³</td>
<td>20000 ft³</td>
</tr>
</tbody>
</table>

Record your group’s answer to Part C here:

<table>
<thead>
<tr>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>20000 ft³</td>
<td>18100 ft³</td>
<td></td>
</tr>
<tr>
<td>Mode</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Task 2:**

Record your group’s assigned measuring device here: **Sonic Laser Tape**

Record your group’s answer to Part A here: 55 ft, 34 ft, 10 ft

Record your group’s answer to Part B here: 1900 ft²

Record your group’s answer to Part C here: 19000 ft³

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>19000 ft³</td>
<td>19000 ft³</td>
<td>19000 ft³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Table 5</th>
<th>Table 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>18990 ft³ (4SF)</td>
<td>18400 ft³ (3SF)</td>
<td>19000 (2SF)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 7</th>
<th>Table 8</th>
<th>Table 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>19000 (2SF)</td>
<td>19000 (2SF)</td>
<td>20000 (2SF)</td>
</tr>
</tbody>
</table>

Record your group’s answer to Part D here:

<table>
<thead>
<tr>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>19000 ft²</td>
<td>19000 ft²</td>
<td>19000 ft³</td>
</tr>
<tr>
<td>Mode</td>
<td>89.0 ft²</td>
<td></td>
</tr>
</tbody>
</table>

Record your group’s answer to Part E here: 540000 L

<table>
<thead>
<tr>
<th>Tables 1-3</th>
<th>Tables 4-6</th>
<th>Tables 7-9</th>
</tr>
</thead>
<tbody>
<tr>
<td>540 000 L</td>
<td>140 000 gal</td>
<td>540 m³</td>
</tr>
</tbody>
</table>

**Task 3:** On Back
1. If you wanted to convert this room to a storage area, you would need to know the volume.
2. To renovate the room
3. To decide how many air conditioners you need

1. For storage it would need to be accurate to 3 sigfigs. Our laser measuring tape can produce this accuracy.

2. For renovation it needs 5 sigfigs. The laser tape is not accurate to 5 sigfigs. You could use another laser tape that is accurate to at least 5 sigfigs.
3. For air conditioning it needs 1 sigfig. The laser tape will produce this accuracy.
List the names of the students at your table:

- Laura Wadowski
- Beth Clement
- Lindsey Whiteley
- Sarah Keedy

**Task 1:**
Record your group’s answer to Part A here: 2,000 ft²

Record your group’s answer to Part B here:

Table 1: 15,000 ft³
Table 2: 20,000 ft³
Table 3: 20,000 ft³
Table 4: 27,000 ft³
Table 5: 21,000 ft³
Table 6: 8,600 ft³
Table 7: 9,600 ft³
Table 8: 20,000 ft³
Table 9: 26,000 ft³

Record your group’s answer to Part C here:

<table>
<thead>
<tr>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,000</td>
<td>20,000</td>
</tr>
</tbody>
</table>

**Task 2:**
Record your group’s assigned measuring device here: fiber glass tape measure

Record your group’s answer to Part A here:

- 54' 4” Length
- 34' 1.5” Width
- 10' 2.9” Height

Record your group’s answer to Part B here:

Table 1: 19,000 -3 SF (laser)  
Table 2: 19,000 -2 SF (laser)  
Table 3: 19,000 -2 SF (laser)  
Table 4: 16,990 -4 SF (laser)  
Table 5: 18,400 -3 SF (16’ tape)  
Table 6: 19,000 - 2 SF (16’ tape)  
Table 7: 19,000 - 2 SF (16’ tape)  
Table 8: 19,000 - 2 SF (yard)  
Table 9: 19,000 - 2 SF (yard)

Record your group’s answer to Part C here:

- 190 x 10⁴ ~ 3 sig. figs

Record your group’s answer to Part D here:

- mean 19,000
- median 390 (pop)
- mode 19,000

Record your group’s answer to Part E here:

- 540,000 L
- 140,000 gal
- 540 m³

**Task 3:** On Back
1) Fire safety hazards - we'd need to know how many fire extinguishers per 30 ft or so, or for capacity and safety issues.

2) Remodeling - we'd need to know their dimensions for paint and floor furnishings.

3) Air conditioning - # of units per square meter or so.

SFs for 1): 2
  Yes, our tape measure can produce accurate SFs due to its detailed and precise measurements.

SFs for 2): 3
  Yes, once again a detailed tape measure, accurately recorded, would be able to produce 3 SFs.

SFs for 3): 2
  Yes, see reasons above.
List the names of the students at your table:

Ruthie Diross
Anna Armstrong
Toby Mueller
Gemma Dove

**Task 1:**
Record your group’s answer to Part A here: 1800 ft²

Record your group’s answer to Part B here: 27,000 ft³

Record your group’s answer to Part C here: 18578 = 19000 ft³

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>27,000 ft³</td>
<td>20,000 ft³</td>
<td>20,000 ft³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Table 5</th>
<th>Table 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,600 ft³</td>
<td>21,000 ft³</td>
<td>8,600 ft³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 7</th>
<th>Table 8</th>
<th>Table 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,000 ft³</td>
<td>26,000 ft³</td>
<td></td>
</tr>
</tbody>
</table>

Record your group’s answer to Part D here: 18990 ft³

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,000 ft³</td>
<td>19,000 ft³</td>
<td>19,000 ft³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Table 5</th>
<th>Table 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,000 ft³</td>
<td>19,000 ft³</td>
<td>19,000 ft³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 7</th>
<th>Table 8</th>
<th>Table 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,000 ft³</td>
<td>19,000 ft³</td>
<td>20,000 ft³</td>
</tr>
</tbody>
</table>

Record your group’s answer to Part E here: 19000 ft³

<table>
<thead>
<tr>
<th>Tables 1-3</th>
<th>Tables 4-6</th>
<th>Tables 7-9</th>
</tr>
</thead>
<tbody>
<tr>
<td>54000 gal</td>
<td>140000 gal</td>
<td>5400 m³</td>
</tr>
<tr>
<td>54000 gal</td>
<td>140000 gal</td>
<td>5400 m³</td>
</tr>
<tr>
<td>54000 gal</td>
<td>140000 gal</td>
<td></td>
</tr>
</tbody>
</table>

Record your group’s answer to Part D here: 19000 ft³

**Task 2:**
Record your group’s assigned measuring device here: measuring tape

Record your group’s answer to Part A here: 34' 3.25" 34' 2.5" 10' 2.2"

Record your group’s answer to Part B here: 34.25 ft 54.46 ft 10.18 ft

Record your group’s answer to Part C here: 1865 ft² (4.5 ft)

Record your group’s answer to Part D here: 19000 ft³

Record your group’s answer to Part E here: 19000 ft³

<table>
<thead>
<tr>
<th>Tables 1-3</th>
<th>Tables 4-6</th>
<th>Tables 7-9</th>
</tr>
</thead>
<tbody>
<tr>
<td>54000 gal</td>
<td>140000 gal</td>
<td>5400 m³</td>
</tr>
<tr>
<td>54000 gal</td>
<td>140000 gal</td>
<td>5400 m³</td>
</tr>
<tr>
<td>54000 gal</td>
<td>140000 gal</td>
<td></td>
</tr>
</tbody>
</table>

**Task 3:** On Back
Need to know Area or Volume

1) lay carpet or floor
2) furnish the room
3) heating/cooling: know the space (volume) to heat or cool - know how many units you need

1) total sq. footage measured to 4 sig Figs so ± 1 ft² off
   * the measuring device need to measure 5 ft²
   * no the fiber measuring tape does not
     measure to enough accuracy it only calculates to 3 sig fig
   * a highly accurate laser would be more appropriate
     (like ones surveyors use)

2) total footage needs 2 sf, yes our tape could produce it because it only needs
to measure in 4 sf dimensions

3) total area needs 3 sf for cooling, yes tape could measure dimensions to 4 sig figs
List the names of the students at your table:

Dan Tucker
Michael Horning
Joseph McBride
Brandon Goodwin

**Task 1:**
Record your group’s answer to Part A here:

100 ft^2

Record your group’s answer to Part B here:

15,000 ft^3
20,000 ft^3

Record your group’s answer to Part C here:

Mean 19,000 ft^3
Median 20,000 ft^3 (population)
Mode
Standard Deviation 6,400 ft^3 (sample)

**Task 2:**
Record your group’s assigned measuring device here:

Tape measurer

Record your group’s answer to Part A here:

34.2 ft
33.6 ft
10.1 ft
Length
Width
Height

Record your group’s answer to Part B here:

18,200 ft^2

Record your group’s answer to Part C here:

19,000 ft^3

Record your group’s answer to Part D here:

Mean 19,000 ft^3
Median 390 ft^3 (population)
Mode
Standard Deviation 410 ft^3 (sample)

Record your group’s answer to Part E here:

40,000 gal
140,000 gal
540 m^3

**Task 3:** On Back

\[ 1 \text{ gal} = 0.131 \text{ m}^3 \]
0. how much air freshener / AC units / anything with air diffusion.
1. how much carpet you need to buy / paint / wallpaper / etc.
2. maximum capacity (as established by the Fire Marshall)
3. 3 S.F. - it works; for floor, we could use more accuracy, like 4 or 5 S.F.; not really; 4 S.F.
4. 2 S.F.; it works; it works.
EF 157 – Fall 2006 – Problem Session 1-2 - Table 6

List the names of the students at your table:

Allison Triggen
John Bohling

Patrick Brokiewa

Task 1:
Record your group’s answer to Part A here: $A = 8600 \text{ ft}^2$

Record your group’s answer to Part B here: $V = 8600 \text{ ft}^3$

Record your group’s answer to Part C here:

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>27,000</td>
<td>21,000</td>
<td>8,000</td>
</tr>
<tr>
<td>9,600</td>
<td>20,000</td>
<td>26,000</td>
</tr>
</tbody>
</table>

Record your group’s answer to Part C here:

<table>
<thead>
<tr>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>$20,000 \text{ ft}^3$</td>
<td>$6400 \text{ ft}^3$</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mode</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Task 2:
Record your group’s assigned measuring device here: tape measure

Record your group’s answer to Part A here:

<table>
<thead>
<tr>
<th>Length</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>651.75</td>
<td>34.1</td>
<td>122.1</td>
</tr>
</tbody>
</table>

Record your group’s answer to Part B here: $A = 1900 \text{ ft}^2$

Record your group’s answer to Part C here:

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,000-3SF-DS</td>
<td>19,000-2SF</td>
<td>19,000-3SF-Tape</td>
</tr>
<tr>
<td>18,990-4SF-FG Tape</td>
<td>18,900-3SF-16&quot; Tape</td>
<td>19,000-2SF-16&quot; Tape</td>
</tr>
<tr>
<td>19,000-2SF-16&quot; Tape</td>
<td>19,000-2SF-Yardstick</td>
<td>20,000-2SF-Yardstick</td>
</tr>
</tbody>
</table>

Record your group’s answer to Part D here:

<table>
<thead>
<tr>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>$19,000 \text{ ft}^3$</td>
<td>$19,000 \text{ ft}^3$</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mode</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Record your group’s answer to Part E here: 140,000 gallons

<table>
<thead>
<tr>
<th>Tables 1-3</th>
<th>Tables 4-6</th>
<th>Tables 7-9</th>
</tr>
</thead>
<tbody>
<tr>
<td>540,000 L</td>
<td>140,000 gal</td>
<td>540 m$^3$</td>
</tr>
</tbody>
</table>

Task 3: On Back
- Air Conditioning Capacity - 2 SF
- Fire Code - 2 SF
- Carpentry / Flooring / Paint - 3 at least
- Fumigation (John's answer) or Air Freshener

Our 16' tape measure would provide enough accuracy for each application except the carpeting because you would want to spend as little as possible on the carpet. A 100' tape measure or an ultrasound measuring device could give us more accurate measurements of the floor area.
List the names of the students at your table:

Ben Reed

Mitchell Grim

Ryan Pearce

Jane Black

**Task 1:**
Record your group’s answer to Part A here:

\[ 800 \times 2 \]

Record your group’s answer to Part B here:

\[ 5600 \times 3 \]

Record your group’s answer to Part C here:

\[ \begin{array}{ll}
\text{Mean} & 20,000 \\
\text{Median} & 6100 \\
\text{Mode} & \\
\text{Standard Deviation} & \\
\end{array} \]

**Task 2:**
Record your group’s assigned measuring device here:

[16' Stanley Tape Measure]

Record your group’s answer to Part A here:

\[ 55 \]

Record your group’s answer to Part B here:

\[ 35 \]

Record your group’s answer to Part C here:

\[ \begin{array}{ll}
\text{Length} & 19.25 \times 4 \times 2 \\
\text{Width} & 19.000 \times 4 \\
\text{Height} & 30.000 \times 4 \times 3 \\
\end{array} \]

Record your group’s answer to Part D here:

\[ \begin{array}{ll}
\text{Mean} & 19,000 \times 4 \\
\text{Mode} & \\
\text{Standard Deviation} & \\
\end{array} \]

Record your group’s answer to Part E here:

\[ 160 \times 20 \]

\[ 590 \times 10 \]

\[ 590 \times 5 \]

**Task 3:** On Back
1) We could know the amount of furniture to put in the room.
2) We could know the amount of cooling needed.
3) It would work with carpeting.

1) Two significant figures, measuring device was sufficient.
2) Two significant figures, measuring device was sufficient.
3) Four significant figures, measuring device is not sufficient. Ultrasound measuring device would be needed.
List the names of the students at your table:

Gabe Johnson  Chad Harris

Lee Troupe       Steven Carey

**Task 1:**
Record your group’s answer to Part A here: 1800 \( \text{ft}^2 \)

Record your group’s answer to Part B here: 2000 \( \text{ft}^3 \)

Table 1       Table 2       Table 3

2000 \( \text{ft}^2 \)      2000 \( \text{ft}^2 \)      2000 \( \text{ft}^2 \)

Table 4       Table 5       Table 6

2000 \( \text{ft}^2 \)      2000 \( \text{ft}^2 \)      2000 \( \text{ft}^2 \)

Table 7       Table 8       Table 9

Record your group’s answer to Part C here:

| Mean \( 3000 \text{ ft}^2 \) | Median \( 2000 \text{ ft}^2 \) | Mode \( 2000 \text{ ft}^2 \) | Standard Deviation \( 8000 \text{ ft}^2 \) |

**Task 2:**
Record your group’s assigned measuring device here: yard stick

Record your group’s answer to Part A here: 55 \( \text{ft} \) 39 \( \text{ft} \) 10 \( \text{ft} \)

Record your group’s answer to Part B here: 1900 \( \text{ft}^2 \)

Record your group’s answer to Part C here:

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,000 ( \text{ft}^3 )</td>
<td>19,000 ( \text{ft}^3 )</td>
<td>19,000 ( \text{ft}^3 )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Table 5</th>
<th>Table 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>18,900 ( \text{ft}^3 )</td>
<td>18,900 ( \text{ft}^3 )</td>
<td>18,900 ( \text{ft}^3 )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 7</th>
<th>Table 8</th>
<th>Table 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,200 ( \text{ft}^3 )</td>
<td>19,000 ( \text{ft}^3 )</td>
<td>19,000 ( \text{ft}^3 )</td>
</tr>
</tbody>
</table>

Record your group’s answer to Part D here:

| Mean \( 19,000 \text{ ft}^3 \) | Median \( 19,000 \text{ ft}^3 \) | Mode \( 19,000 \text{ ft}^3 \) | Standard Deviation \( 540 \text{ ft}^3 \) |

Record your group’s answer to Part E here:

540 \( \text{m}^3 \)

<table>
<thead>
<tr>
<th>Tables 1-3</th>
<th>Tables 4-6</th>
<th>Tables 7-9</th>
</tr>
</thead>
<tbody>
<tr>
<td>590,000 ( \text{m}^3 )</td>
<td>19,000 ( \text{m}^3 )</td>
<td>540 ( \text{m}^3 )</td>
</tr>
</tbody>
</table>

**Task 3:** On Back
1. for air conditioning - 2 sft yard stick
2. wiring for computers/ electrical wiring - 3 to 4 sft laser
3. property taxes - 1 sft yard stick
List the names of the students at your table:

Bob Race
The Recorder
Nathan Roberts

Nick Shaffer
Daniel Curry

**Task 1:**
Record your group’s answer to Part A here: \(2200 \text{ ft}^2\)

Record your group’s answer to Part B here:

Table 1: \(15,000 \text{ ft}^3\)
Table 2: \(20,000 \text{ ft}^3\)
Table 3: \(20,000 \text{ ft}^3\)

Table 4: \(27,000 \text{ ft}^3\)
Table 5: \(21,000 \text{ ft}^3\)
Table 6: \(8,600 \text{ ft}^3\)

Table 7: \(9,600 \text{ ft}^3\)
Table 8: \(20,000 \text{ ft}^3\)
Table 9: \(26,000 \text{ ft}^3\)

Record your group’s answer to Part C here:

Mean \(20,000 \text{ ft}^3\)
Median \(6,000 \text{ ft}^3\)
Mode
Standard Deviation

**Task 2:**
Record your group’s assigned measuring device here: \(\text{Lowe's wooden yardsticks}\)

Record your group’s answer to Part A here: \(9\text{ ft}^1\)
Record your group’s answer to Part B here: \(3\text{ ft}^1\)
Record your group’s answer to Part C here: \(1998.10.15 \text{ ft}^3 = 2022.75 \text{ ft}^3 = 2000 \text{ ft}^3 \text{ (2SF)}\)

Record your group’s answer to Part D here:

Mean \(19,000 \text{ ft}^2\)
Mode \(19,000 \text{ ft}^2\)
Median \(19,000 \text{ ft}^2\)
Standard Deviation

Record your group’s answer to Part E here:

\(540 \text{ m}^3\)

Tables 1-3
 Tables 4-6
 Tables 7-9

**Task 3:** On Back
Air conditioning specifications - 15F

# of pine-tree air fresheners to eliminate student funk - 15F

Property tax rate - 25F

(all SF sufficient)