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## THE MATH CAFE

The café below is drawn to scale. Each square equals one square foot.


| $\#$ | Item |
| :---: | :---: |
| 1 | Sofa |
| 2 | Arm Chair |
| 3 | Coffee Table |
| 4 | Side Table |
| 5 | Rectangular Table |
| 6 | Bench |
| 7 | Round Table |
| 8 | Sofa |
| 9 | Arm Chair |
| 10 | Coffee Table |
| 11 | Side Table |
| 12 | Dining Chair |

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## THE MATH CAFE

Part 1: Use the scale drawing of the cafe to answer the following questions.

1. What is the diameter of the round tables (7)?
2. What are the dimensions of the rectangular tables (5)?
3. What are the dimensions of the benches (6)?
4. What are the dimensions of the sofas (1 and 8)?
5. What are the dimensions of the restrooms?
6. What is the total area of the cafe?
7. What is the perimeter of the cafe?
8. What is the area of the storage room?

Part 2: The Math Cafe has hired you to redesign its space. Give the cafe a new catchy name. Select new furniture from the options below. On a blank piece of paper, draw the cafe to scale. Choose a scale of $1 / 4^{\prime \prime}=1{ }^{\prime \prime} 0$ or $1 / 8^{\prime \prime}=1{ }^{\prime} 0^{\prime \prime}$. The walls will stay as they are. Draw the new furniture you choose. Be sure the cafe can seat at least 30 people. Include your name, the cafe name, and the scale.

| Item | Floor Plan View | Dimensions |
| :---: | :---: | :---: |
| Square Table | $\square$ | $4^{\prime} \times 4^{\prime}$ |
| Rectangular <br> Table | $\square$ | $4^{\prime} \times 8^{\prime}$ |
| Circular Table | $\square$ | $3^{\prime}$ diameter |
| Chair | $\square$ | $18^{\prime \prime} \times 18^{\prime \prime}$ |
| Stool | $\square$ | $1^{\prime}$ diameter |
| Sofa | $\square$ | $3^{\prime} \times 6^{\prime}$ |
| Arm Chair | $\square$ | $3^{\prime} \times 3^{\prime}$ |
| Coffee Table | $\square$ |  |

