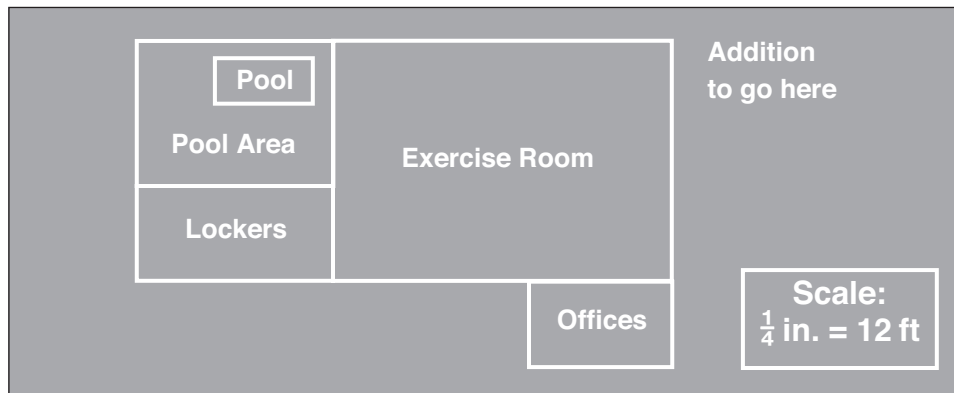


MATH LINK 15: BLUEPRINT FOR FUN

You are looking into purchasing an old health club and converting it into TSN Fun Zone, a children’s sports and play center. The blueprint of the health club is shown below. If TSN buys the health club, it would do the following:

- Add a 45×35 foot addition to the building.
- Convert the pool to a sand pit for younger children by reducing the width of the pool by $\frac{1}{2}$ and the depth by $\frac{1}{3}$.
- Increase the length of the offices by $1\frac{1}{2}$ the current length.



Use your ruler to find the lengths and widths of each section of the health club on the blueprint. Record the horizontal measure for each section as the length. Then use proportions to find the actual length and width of each section. Next find the actual area of each section.

Section of Health Club	Length on Blueprint	Width on Blueprint	Actual Length	Actual Width	Actual Area
Lockers	1 in.	0.5 in.	48 ft	24 ft	576 sq. ft
Pool Area (with pool)	1 in.	0.75 in.	48 ft	36 ft	1,728 sq. ft
Pool	0.5 in.	0.25 in.	24 ft	12 ft	288 sq. ft
Exercise Room	1.75 in.	1.25 in.	84 ft	60 ft	5,040 sq. ft
Offices	0.75 in.	0.5 in.	36 ft	24 ft	864 sq. ft

If the pool is currently 6 feet deep, what is the volume? 1,728 cubic feet

What will the volume of the sand pit be? 576 cu. ft

How much area will be added to the offices? 432 sq. ft

What is the current total square footage of the health club? 576

+ 1,728 + 5,040 + 864 = 8,208 sq. ft

What will the square footage be after the addition is put on and the offices are expanded? 10,215 square feet

Show your work here:

$$24 \div 2 = 12 \text{ ft long}$$

$$6 \times \frac{1}{3} = 2 \text{ ft}$$

$$6 - 2 = 4 \text{ ft (new depth)}$$

$$12 \times 12 \times 4 = 576 \text{ cu. ft}$$

Show your work here: $(45 \times 35) + 432 + 8,208$
 $1,575 + 432 + 8,208 = 10,215$

In your Math Journal, write about jobs or careers in which you might need to be able to read a scale drawing.