GOAL: Determine the actual size of an apartment from a scale drawing.

CLASSWORK DETAILS DAY 2

Today we are going to measure the dimensions of rooms of an apartment as they were drawn to scale. From this we can determine the dimensions of these rooms in real-life.

Important information to remember for today's activity:

Width $\longleftrightarrow$ Length $\updownarrow$ $\frac{1}{4} = 0.25$ $\frac{2}{4} = 0.5$ $\frac{3}{4} = 0.75$ $\frac{4}{4} = 1.0$

- Measure to the nearest quarter of an inch from the inside of the wall to the inside of the wall

- The perimeter of a rectangle is the distance around the room and can be found by adding all the sides or by using the formula: P = 2L+2W

- The area of a rectangle is the number of squares that can fit into the rectangle. One easy way to think of it is that the floor covers the area of the room. The area of a rectangle can be found by the formula: $A = L \bullet W$

- The scale is the same as yesterday: $\frac{1}{4}$ in = 1 ft (this also means 1 in = 4 ft)

- Area is measured in *square units*. You can't compare perimeter and area as they are measured with different types of units.

- The bedroom is not a perfect rectangle. You are going to have to divide up the room into two separate rectangles and determine the area of each. For example:

Area 1

Area 2
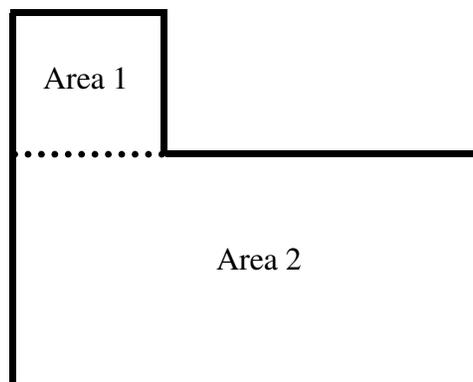
Place all notebook paper with calculations on it in your architecture binder.

APARTMENT PLAN

Scale: 0.25 in. = 1 ft.

DINING ROOM

LIVING ROOM

KITCHEN

REF

BEDROOM

CLOSET

CLOSET

BATH
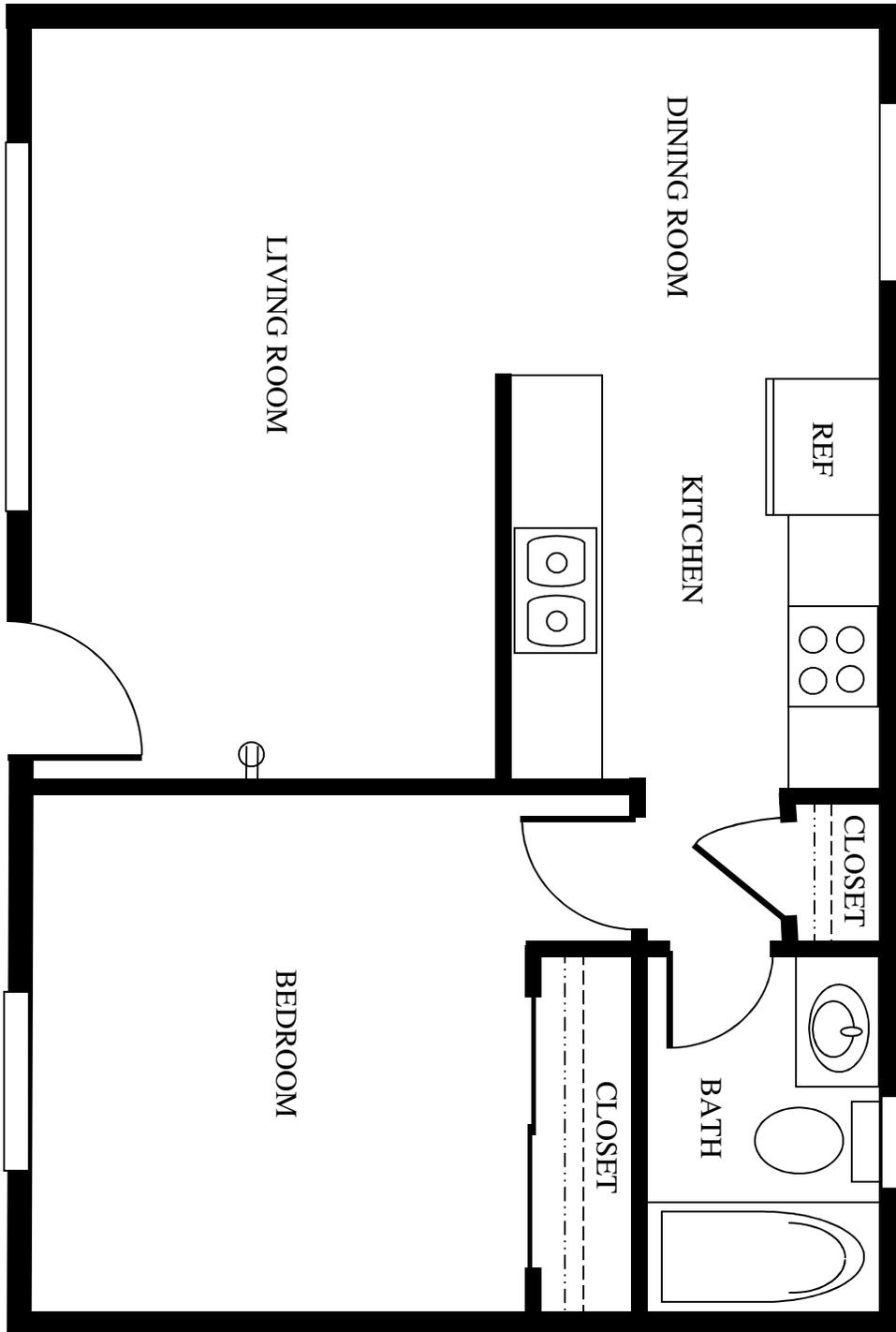
Scale used		Width ⟷ Length ↕

ROOM	Width (in.)	Length (in.)	Perimeter (in.)	Area (sq. in.)	
Living Room					**DRAWING SIZE**
Kitchen					
Dining Room					
Part 1 (small) Bedroom					
Part 2 (large)					
Bath					
Large Closet					
Hall Closet					
***** TOTAL AREA *****					

ROOM	Width (ft.)	Length (ft.)	Perimeter (ft.)	Area (sq. ft.)	
Living Room					**REAL-LIFE SIZE**
Kitchen					
Dining Room					
Part 1 (small) Bedroom					
Part 2 (large)					
Bath					
Large Closet					
Hall Closet					
***** TOTAL AREA *****					

	Width (ft.)	Length (ft.)	Perimeter (ft.)	Area (sq. ft.)
Measure the entire Apartment (include outside walls)				

Does the sum of the areas of all the rooms equal the total area of the apartment? Why or why not?	
If you doubled the length of each side of a room, the perimeter would multiply by…	
If you doubled the length of each side of a room, the area would multiply by…	
A house has outside measurements of 46 feet by 56 feet. You want to make a scale drawing of the house on 8.5 by 11 inch graph paper. You need to obtain the largest accurate drawing that will fit on the paper. You scale should be 1 inch equals…	

TURN IN ALL CALCULATION WORK DIRECTLY BEHIND THIS PAGE