# **CHAPTER 21 EXERCISES**

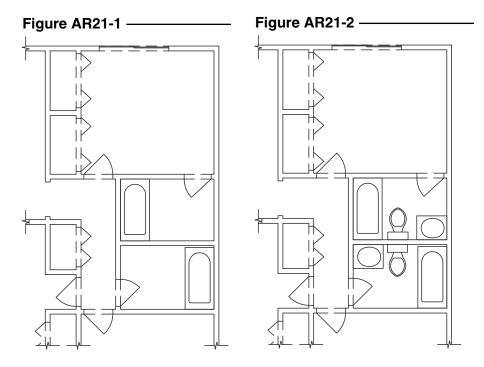
#### 1. Ddinsert

A. For the next exercise you will need the following drawings:

```
DW.DWG
FRIDG.DWG
SINK.DWG
STOVE.DWG
TUB.DWG
VANITY.DWG
WC.DWG
2040WINDOW.DWG
```

These drawings may be provided by your instructor or can be downloaded from the www.mhhe.com/leach web site.

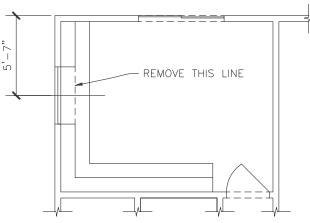
- B. Open the PLAN drawing and Freeze the text layer.
- C. Create a new layer called A-PLFR-FIXTURES and make it the *Current* layer.
- D. Type in *Insert*, select *Browse*, and select **TUB.DWG** from the desired folder. Use a scale factor of 1 and an insertion point at the *Endpoint* of the bathroom wall as shown in Figure AR21-1. *Insert* the tub into both bathrooms.
- E. Continue inserting the rest of the fixtures (**WC** and **VANITY**) into the bathrooms as shown in Figure AR21-2. Use *Osnaps* where appropriate based on the base points for each *Block* you insert.



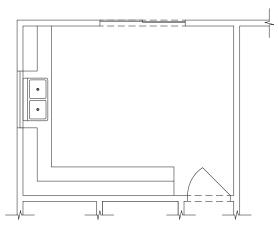
# 2. Kitchen

- A. Next, lay out the kitchen. This requires drawing the cabinets and *Inserting* the proper symbols. *Offset* the inner wall line 24" to the inside of the kitchen. Next *Offset* another line from the inside wall 12". *Trim* as necessary. See Figure AR21-3.
- B. *Insert* the **2040WINDOW** into the kitchen at a distance of 5'-7" from the other wall.
- C. *Trim* the overhead cabinets (middle lines) even with the window as shown in figure AR21-3.
- D. *Insert* the **SINK.DWG** centered on the window as shown in Figure AR21-4. Use the *Midpoint Osnap* option.

#### Figure AR21-3 -

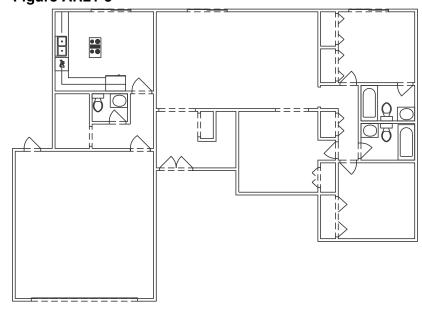


#### Figure AR21-4 -



E. Continue to *Insert* the **DW.DWG**, **STOVE.DWG** and **FRIDGE.DWG** into the kitchen. Also *Insert* the **WC.DWG** and **VANITY.DWG** into the half bath above the garage. See Figure AR21-5.

#### Figure AR21-5 -



### 3. Additional Kitchens

Draw each of the following kitchen types shown in Figure AR21-6. Use the symbols from the previous exercise.

# Figure AR21-6 -

