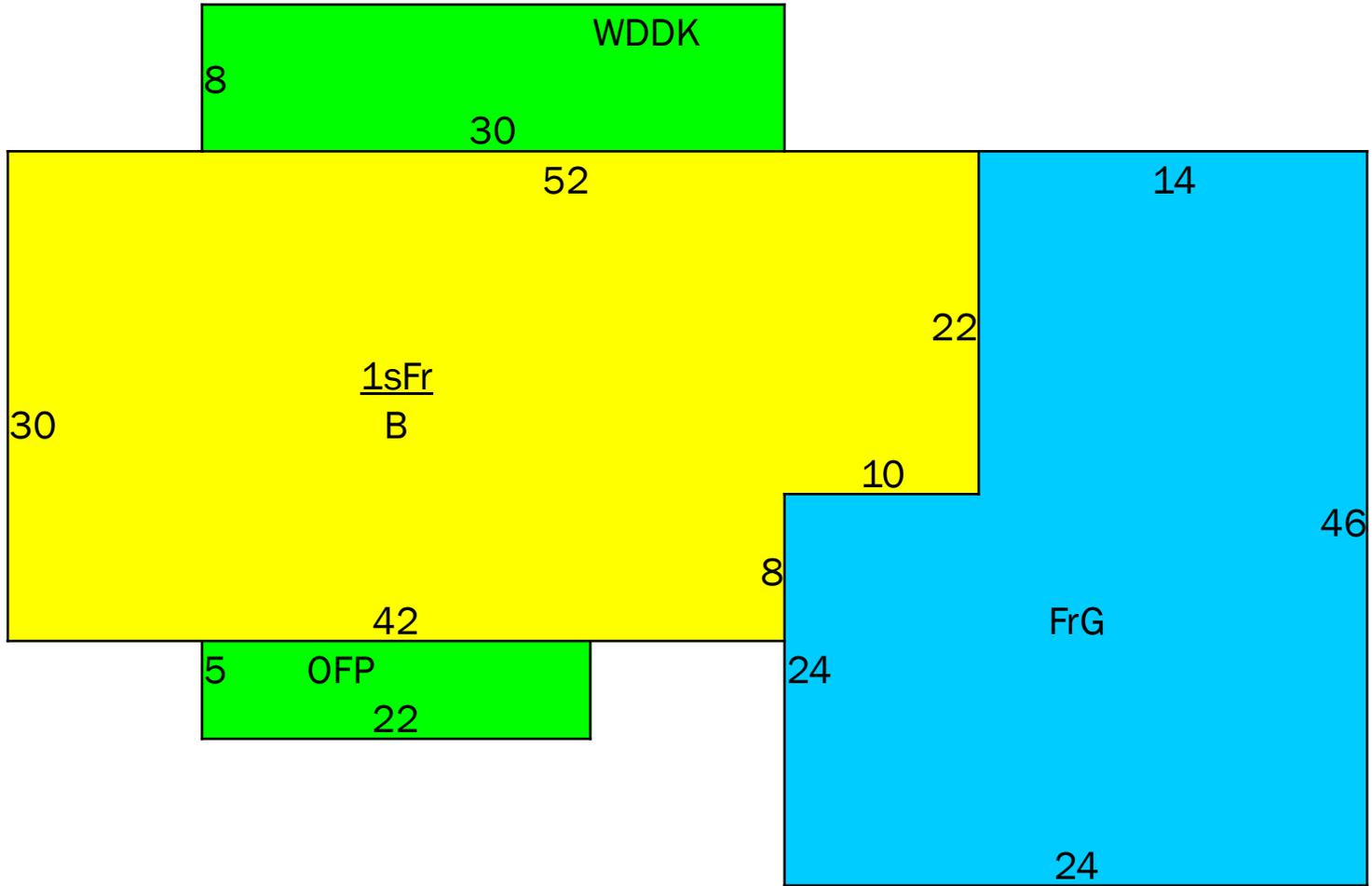


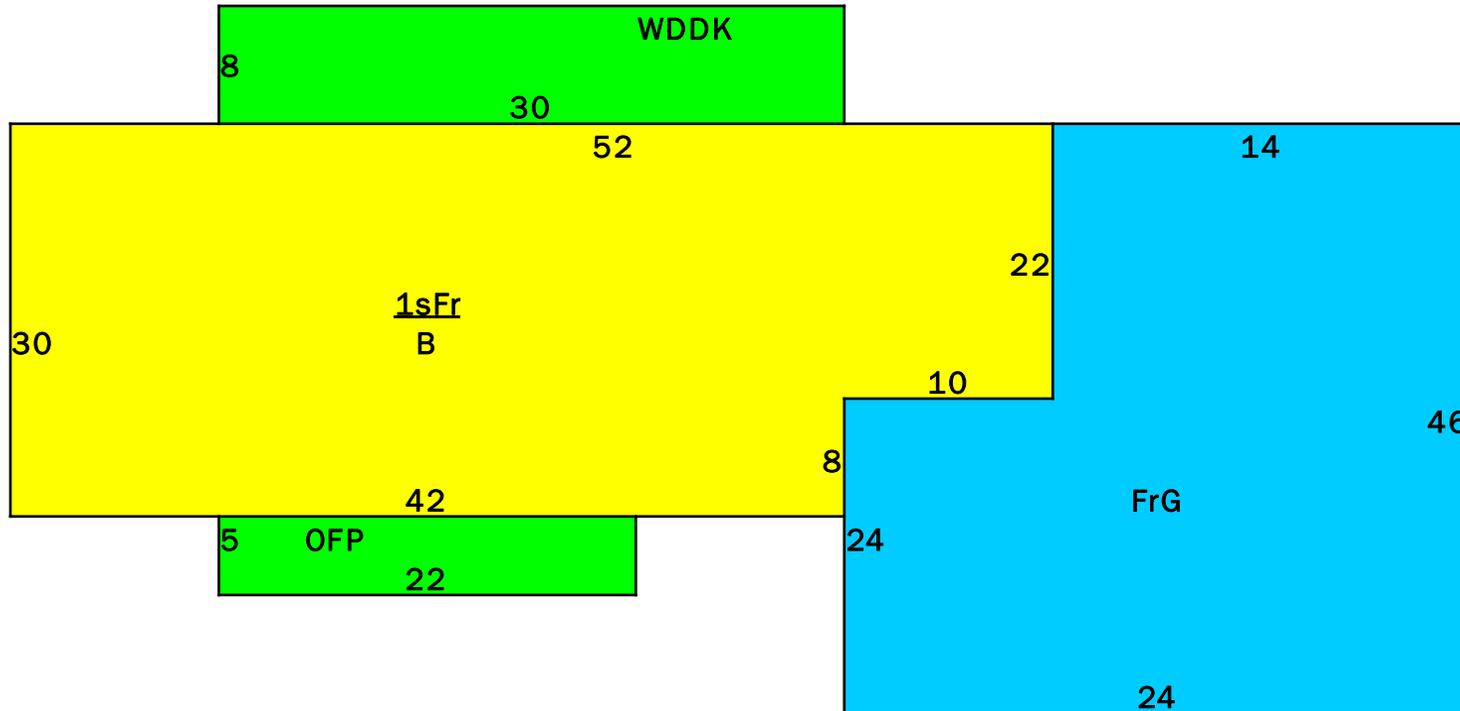
Level I  
 Cost Approach  
 Practice Problem # 6 House # 1  
 Additional Square Foot Calculation Problems



	Sq. Feet	Value
1sFr		
B		
FrG		
OFP		
Wddk		
TOTAL		\$0



Level I  
 Cost Approach  
 Practice Problem # 6 House # 1 Answer  
 Additional Square Foot Calculation Problems

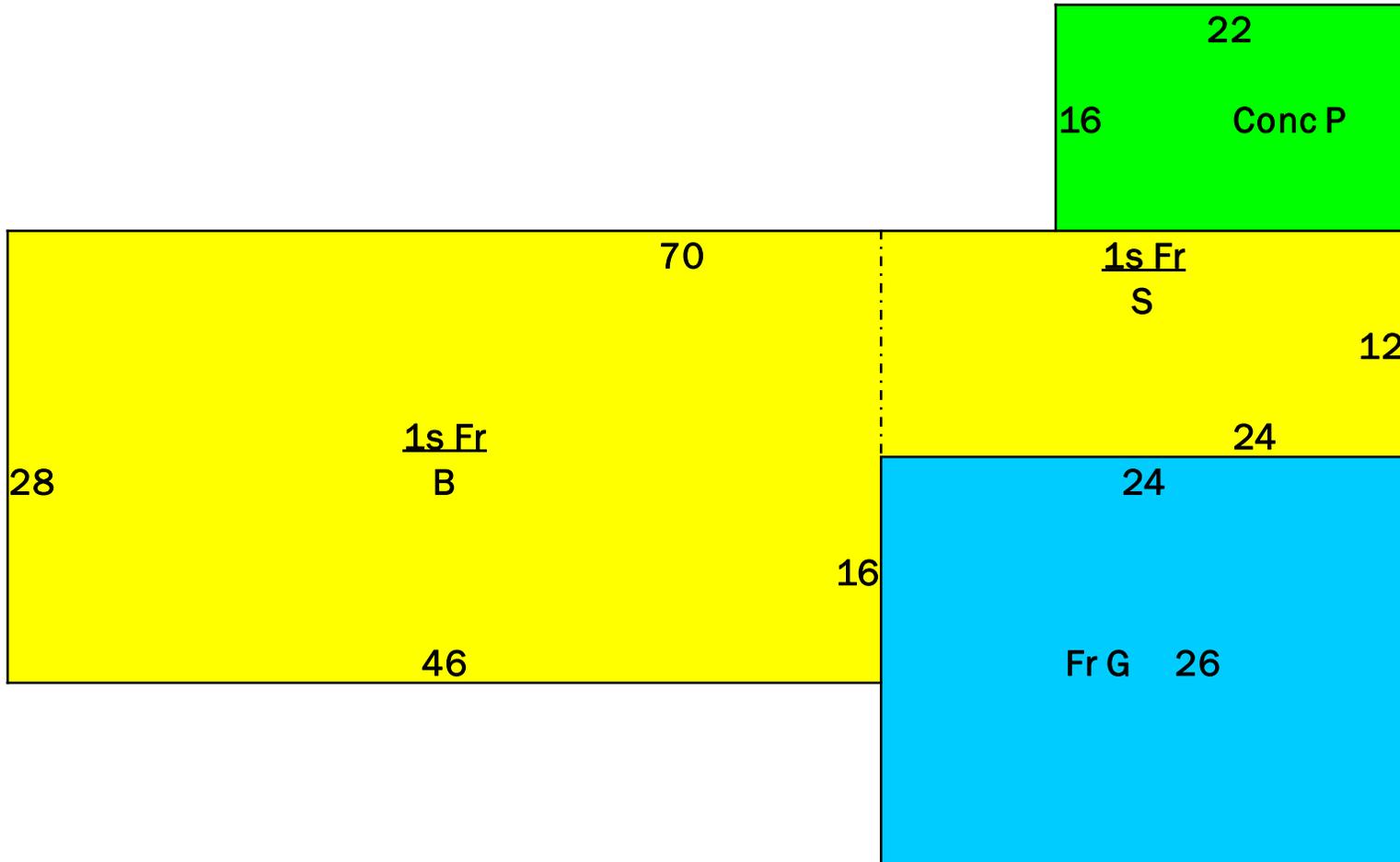


	Sq. Feet	Value
1sFr	1,480	\$92,100
B	1,480	\$30,700
FrG	884	\$22,300
OFP	110	\$4,400
Wddk	240	\$3,900
	-	
	-	
<b>TOTAL</b>		<b>\$153,400</b>

30 X 42 = 1,260 + 10 X 22 = 220 for total first story of	1480
same for basement	1480
24 X 24 = 576	
14 X 22 = 308 for a total square footage of	884
5 X 22 = 110 for a total square footage of	110
8 X 30 = 240 for a total square footage of	240



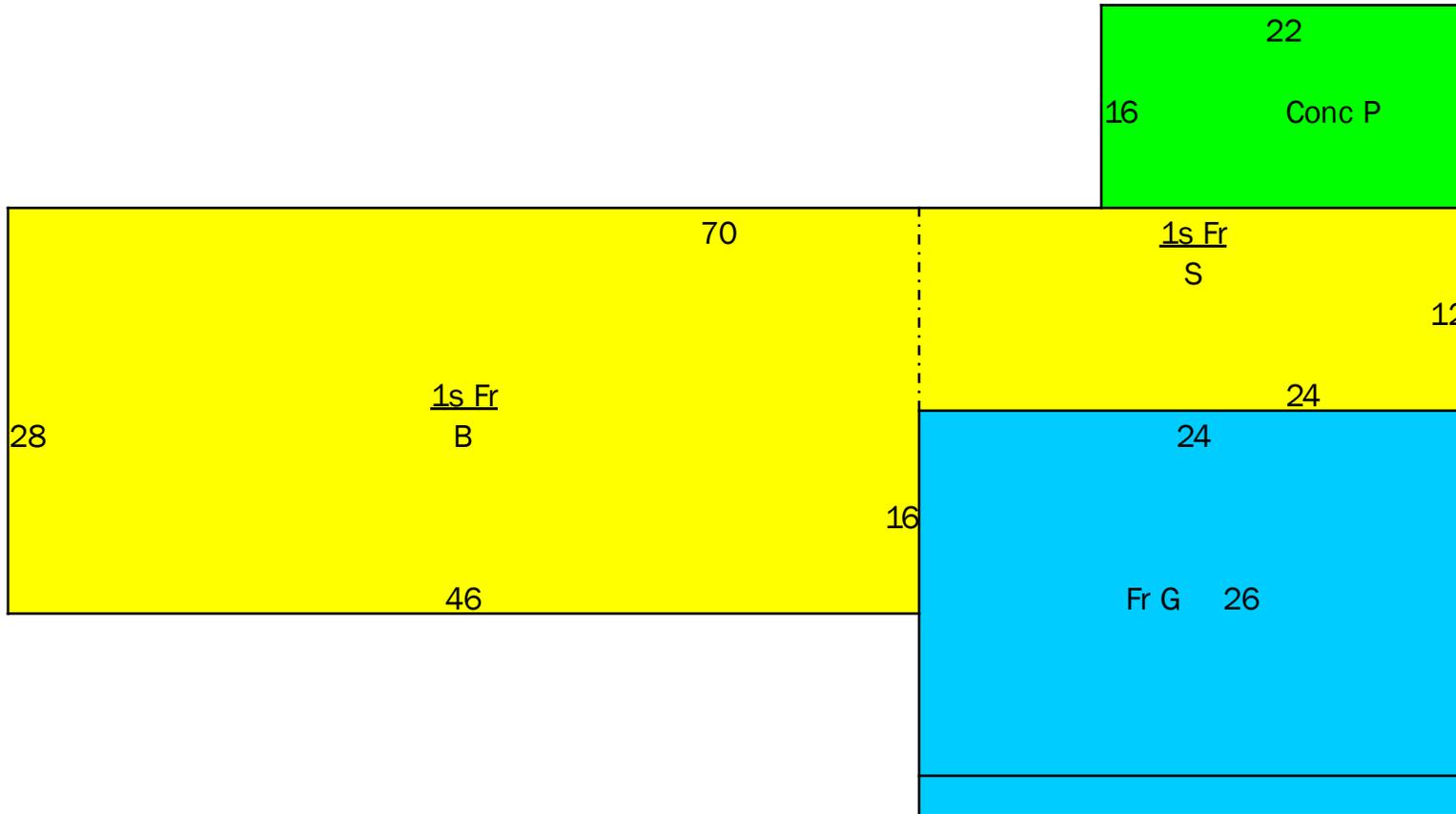
Level I  
 Cost Approach  
 Practice Problem # 6 House # 2  
 Additional Square Foot Calculation Problems



	Sq. Feet	Value
1sFr		
B		
FrG		
Conc P		
	-	
	-	
<b>TOTAL</b>		<b>\$0</b>



Level I  
 Cost Approach  
 Practice Problem # 6 House # 2 Answer  
 Additional Square Foot Calculation Problems

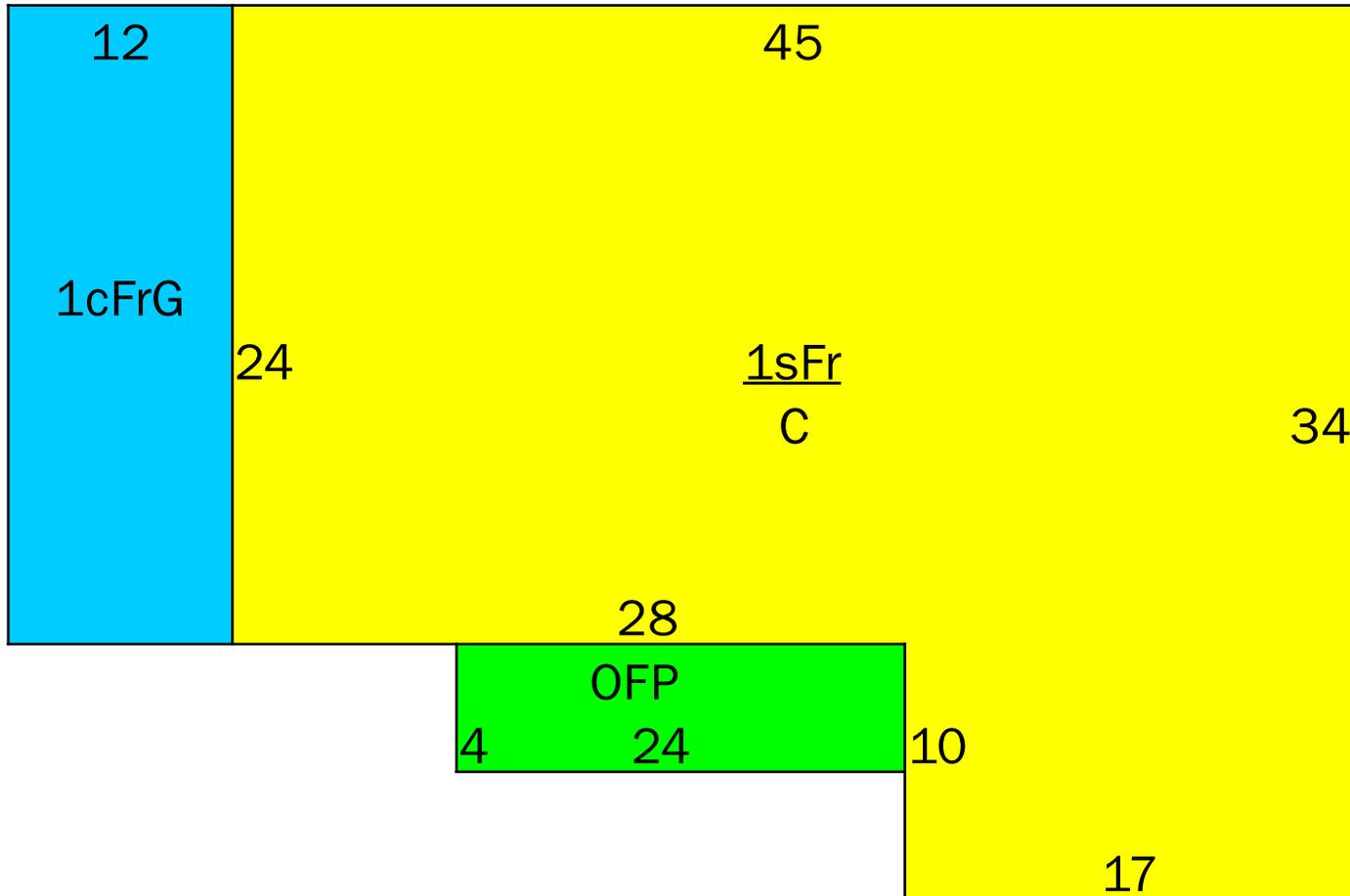


	Sq. Feet	Value
1sFr	1,576	\$95,900
B	1,288	\$28,600
FrG	624	\$16,700
Conc P	352	\$1,700
TOTAL		\$142,900

46 X 28 = 1,288 +  
 24 X 12 = 288 for a total square footage of 1,576  
 46 X 28 = 1,288 (For the Basement)  
 24 X 26 = 624  
 16 X 22 = 352



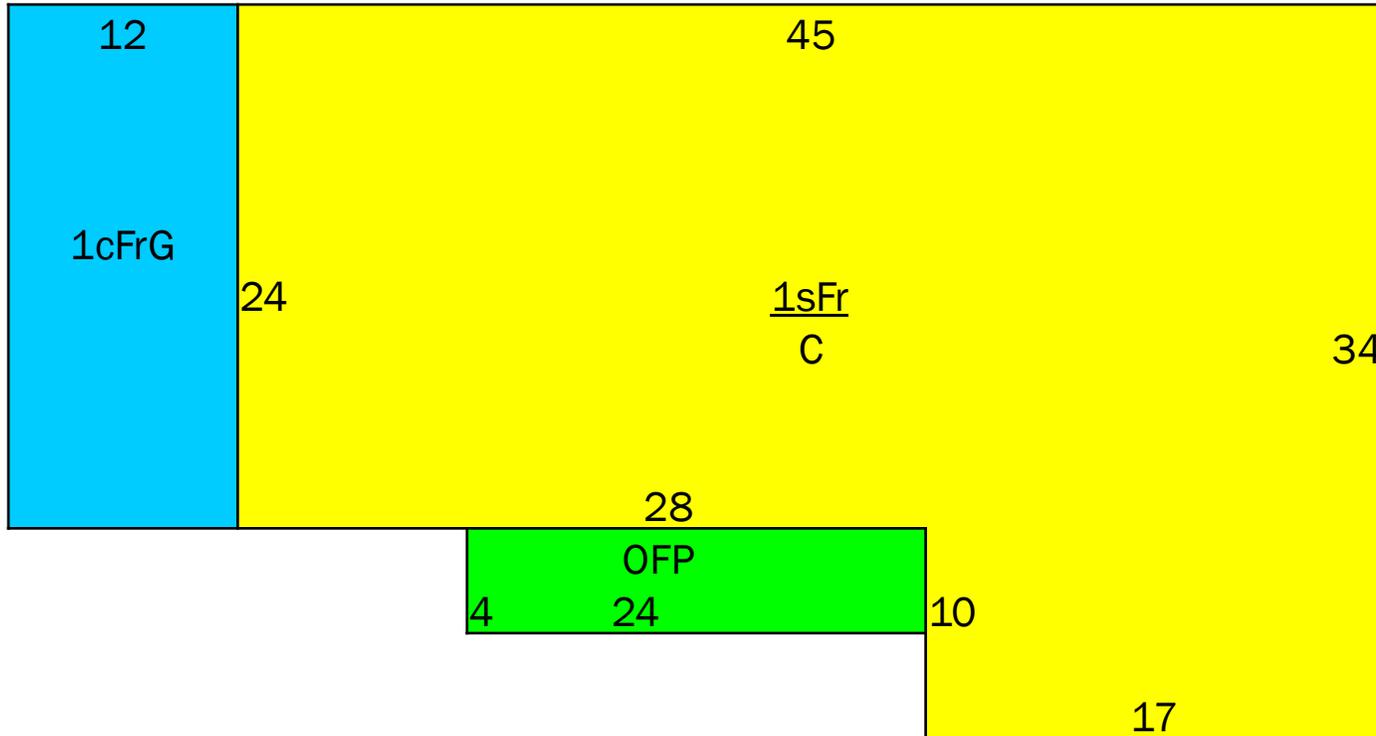
**Level I**  
**Cost Approach**  
**Practice Problem # 6 House # 3**  
 Additional Square Foot Calculation Problems



	Sq. Feet	Value
1sFr		
C		
1cFrG		
OFP		
	-	
	-	
	-	
TOTAL		\$0



Level I  
 Cost Approach  
 Practice Problem # 6 House # 3 Answer  
 Additional Square Foot Calculation Problems



	Sq. Feet	Value
1sFr	1,250	\$84,200
C	1,250	\$6,100
1cFrG	288	\$10,500
OFP	96	\$4,400
TOTAL		\$105,200

45 X 24 = 1080 Square Feet +  
 10 X 17 = 170 Square Feet = 1,250 1sFr & C same  
 12 X 24 = 288 Square Feet  
 4 X 24 = 96 Square Feet



**Level I**  
**Cost Approach**  
**Dwelling/Yard Structures**

- 1.) You are assessing a basement of 1,500 square feet. Of the total, 850 square feet is finished space. What amount would you put on the property record card to reflect the assessment for the basement?
- 2.) A 1,400 square foot one-story frame house has two increments of brick on the front. What base price would you put on the property record card for the home?
- 3.) A brick home has 2,500 square feet on the first floor and 1,750 square feet on the second floor. You also have an unfinished basement of 2,500 square feet. What base prices would you record on the property record card for each floor? What would be the subtotal for the base prices?
- 4.) On January 1, a dwelling is not complete. When you do your field work, you discover that the house is complete to the point where the owners are ready to install the plumbing fixtures, floor coverings and light fixtures. You have calculated a remainder value for this home of \$195,700. Since it is not finished, what value would you place on the property record card for this home?



**Level I  
Cost Approach  
Dwelling/Yard Structures Answers**

# 1.) 1500 square foot basement. 850 square feet is finished.	
price for 1500 square foot basement unfinished PLUS	\$31,000
price for 850 square feet of finish in basement	\$23,800
Appendix C, Schedule A	<b>\$54,800</b>
# 2.) 1400 square foot one story frame house with two increments of brick.	\$89,400
Value for increment and home	\$3,200
Chapter 3, page 26 for brick increment explanation	<b>\$92,600</b>
Appendix C, page 2 for value	
# 3.) Brick two story home	
2500 square feet on first floor	\$149,700
1750 square feet on second floor	\$63,900
2500 square feet unfinished basement	\$44,300
Appendix C, Schedule A	<b>\$257,900</b>
# 4.) Ready to install plumbing fixtures	
RCN of home	\$195,700
percent complete Appendix C, Schedule A.1	83%
	\$162,431
Round	<b>\$162,430</b>



**Level I**  
**Cost Approach**  
**Dwelling/Yard Structures**

- 5.) A home has a basement recreation room that has flooring and ceiling finish. It occupies 968 square feet. What value will you put on the property record card for the basement recreation room?
- 6.) Using the square footage from problem 3 above, how much would you add on the property record card for air conditioning?
- 7.) A house has 2 full baths and 2 half baths. How much will you show on the property record card for plumbing?
- 8.) The house in problem 3 has an attached brick garage that is 20 feet X 22 feet. What amount will you show on the property record card for this garage?



**Level I  
Cost Approach  
Dwelling/Yard Structures**

# 5.) Basement Rec Room with ceiling & floor finish

\$4,500

This is a Rec Room 1--Chapter 3, Page 28-Table 3-11

# 6.) Add for A/C based on Problem 3 square footage

\$5,000

\$2,600

\$7,600

# 7.) What needs to be added for plumbing for house in #3?

2 full baths 3 fixtures in each one =

6

Base Price Includes 1 Full bath, Kitchen Sink & Water Heater

2 half bath 2 fixtures in each one=

4

So you know you have:

1 water heater 1 fixture allowed

1

OR

1 Full Bath Extra 3 Fixtures =

3

2 Half Baths Extra 2 Fixtures =

4

1

*Number of fixtures to add for*

7

12

Less number allowed in pricing in App C

-5

7

Price to add from App C, Schedule D, page 7

\$800

\$5,600

\$5,600

# 8.) Attached Brick Garage for House in # 3

440 square feet

Value to add for Garage From App C, Sch. E.2, page 7

\$13,200



**Level I**  
**Cost Approach**  
**Dwelling/Yard Structures**

- 9.) The house in problem 3 also has a brick patio that contains 650 square feet, an open masonry porch of 348 square feet and a stoop of 80 square feet. What amount will you show on the property record card?
- 10.) A quality grade factor of B-1 is what percent?
- 11.) You are trying to determine the value of a detached frame garage that measures 30 feet by 50 feet. It contains a dirt floor and is a Grade C-1. What is the base rate for the garage? It is in Marshall County. What is the adjusted base rate?
- 12.) A dwelling is 12 years old, has a Quality Grade of C+2, and is in Average condition. What is the depreciation percentage for this dwelling? If the dwelling has an RCN of \$210,500, what is its Remainder Value? Round your answer to the nearest \$10.





**Level I  
Cost Approach  
Practice Problem # 1**

You are valuing a detached garage. The following information is given to you. What total improvement value will you provide?

Detached Frame Garage	600 square feet	
Dirt Floor		
Grade		C-1
Location Multiplier Tippecanoe County		0.91
Neighborhood Factor		0.93
Built		1954
Condition		Fair



**Level I  
Cost Approach  
Practice Problem # 1 Answer**

Detached Frame Garage	600 square feet
Dirt Floor	
Grade	C-1
Location Multiplier Tippecanoe County	0.91
Neighborhood Factor	0.93
Built	1954
Condition	Fair

Calculate Base Rate	
Det. Garage Base Price (Schedule G.1) =	\$27.86
Less Dirt Floor	-\$5.53
Adjusted Base Price	\$22.33
C-1 Quality Grade Factor	x 95%
<b>BASE RATE</b>	<b>\$21.21</b>

SUMMARY OF NON-RESIDENTIAL IMPROVEMENTS																		
ID	Use	Storv Hgt.	Const. Type	Grade	Year Const.	Eff Age	Cond.	Base Rate	Features	L/M	Adj. Rate	Size or Area	Replacement Cost	Total Depr.	Remainder Value	% Comp	Nhbd Factor	Improvement Value
01	Det Gar	1.0	Fr	C-1	1954		Fair	\$21.21		0.91	\$19.30	600	\$11,580	47%	\$6,140		0.93	\$5,700
02																		

Improvement Value for Detached Frame Garage	<b>\$5,700</b>
---	----------------



**Level I  
Cost Approach  
House # 1:**

This house is in Clark County. It is a frame house that was built in 1905. It is in good condition with a B-1 Grade. The neighborhood factor is 1.01. The house contains 1,173 square feet and has one bath. It has central air. There is an open frame porch of 149 square feet. There is a detached concrete block garage that measures 22 feet by 20 feet. It was built in 1990 and is a grade C+1 in average condition.

What is the total improvement value?



IMPROVEMENT DATA AMD COMPUTATIONS

Cost Approach

HOUSE #1

Clark County 91%

Schedule A 1175

Open Frame Porch 149 square feet

\$5,700

schedule e.2 150

\$5,700

A/C schedule c 1200

First Story \$3,000

\$3,000

Det Garage: 22 X 20 (440 Sq Ft) Concrete Block  
C+1 Grade  
Base Rate

\$ 30.37

schedule g.1 450

105%

schedule f

\$ 31.89

IMPROVEMENT FEATURES	
Major Items	Agricultural
C Concrete Floor	Barns
D Dirt floor	T/S/L/P/E/I/D/Q
E Electric Lights	Open Side
G Grade	Confinement
H Heating	T/P/E/C/I
I Insulation	Slatted Floors
L Loft	Pits
P Plumbing	Corn Crib
Q Living Quarters	T
S Stalls	Frame/Wire
T Type of Const.	Free standing
	Drive-thru
	No Roof
	Floor
	GRANARIES
	L
	Storage Bins
	Pole Type
	GRAIN BINS
	Diameter & Height
	or Bushel Capacity
	QUONSET BUILDING
	E/I/H
	Floor:Asph/Conc
	SLURRY TANKS
	In/above ground
	Round/Rectangle
	Plank / No Cover
	SILO
	Concrete:
	Conc.Stave/Reinf'd
	Masonry:
	Tile/Conc.. Blk/Brick
	Steel:
	Unlined/Glass Lined
	No Roof
	TRENCH AND BUNKER
	SILO
	Depth
	Width
	TENNIS COURT
	Clay/Sod/Asphalt
	UTILITY SHED
	T/G

Occupancy		Story Height	Attic		Bsmt Crawl	
1	Single Family	[ ] -	0	None	0	None
2	Duplex	2 Bi-level	1	Unfinished	1	1/4
3	Triplex		2	1/2 Finished	2	1/2
4	4-6 Family		3	3/4 Finished	3	3/4
5	M. Home	3 Tri-level	4	Finished	4	Full
	0 Row-type					
Construction		Base Area	Floor	Finished Living Area		Value
1	Frame or Aluminum	1	1,173	1.0	1,173	\$81,100
2	Stucco					
3	Tile					
4	Concrete Block					
5	Metal					
6	Concrete					
7	Brick			Attic		
8	Stone			Bsmt.		
9	Frame w/Masonry			Crawl		
Roofing		TOTAL BASE				\$81,100
Asphalt Shingles						
Slate or Tile		Row-type Adjustment				100%
Metal		SUB-TOTAL				\$81,100
Floors B 1 2						
Earth		Unfinished interior [-]				
Slab		Extra Living Units [+]				
Sub & Joist		Rec. Room [+]				
Wood Parquet		Loft [+]				
Tile		Fireplace [+]				
Carpet		No Heating [+]				
Unfinished						
Interior Finish B 1 2		Full				Air Conditioning [+]
Plaster or Dry Wall						\$3,000
Paneling						No Electric [+]
Fiberboard						
Earth		Plumbing				TF 5 - 5 = 0 x \$800
Unfinished		No Plumbing				[+]
No Electrical		Specialty Plumbing				[+]
Accommodations		SUB-TOTAL ONE UNIT				
Garages		SUB-TOTAL UNITS				
Total Number of Rooms		Integral				-
Bedrooms		Attached Garage				
Family Room		Attached Carport				
Formal Dining Room		Basement [+]				
Loft Area		Exterior Features				\$5,700
Rec. Room		SUB-TOTAL				\$89,800
Fire Place		Grade and Design Factor				115%
Masonry		schedule F				
Metal		ADJUSTED SUB-TOTAL				\$103,270
Openings		Location Multiplier				91%
		Replacement Cost				\$93,980

SUMMARY OF RESIDENTIAL IMPROVEMENTS																			
ID	Use	Story Hgt.	Const. Type	Grade	Year Const.	Eff Age	Cond.	Base Rate	Features	L / M	Adj. Rate	Size or Area	Replacement Cost	Total Depr.	Remainder Value	% Comp	Nhbd Factor	Improvement Value	
01	Dwelling	1.0	Fr	B-1	1905	115	Good						\$93,980	30%	\$65,790		1.01	\$66,400	
02	Det Gar	1.0	CB	C+1	1990	30	Avg	\$31.89		91%	\$29.02	440	\$12,770	24%	\$9,710		1.01	\$9,800	
03																			
04																			
05																			
06																			
07																			
													Supplemental Card Residential Improvement Total						
													Total Residential Improvement Value				\$76,200		

SUMMARY OF NON-RESIDENTIAL IMPROVEMENTS																			
ID	Use	Story Hgt.	Const. Type	Grade	Year Const.	Eff Age	Cond.	Base Rate	Features	L / M	Adj. Rate	Size or Area	Replacement Cost	Total Depr.	Remainder Value	% Comp	Nhbd Factor	Improvement Value	
01	Heat & Air Conditioning																		
02	Central Warm Air																		
03	Hot Water or Steam																		
04	Heat Pump																		
05	NO HEAT																		
06	Gravity,Wall,Space																		
07	Central Air Cond.																		
													Supplemental Card Non-Residential Improvement Total						
													Total Non-Residential Improvement Value						

Data Collector / Date

Appraiser / Date

**Level I  
Cost Approach  
House # 2:**

This brick 2 story home is located in Vermillion County. It was built in 1993. It is in average condition and graded a C. The neighborhood factor is 1.03. The house contains 2,329 square feet on the first floor and 1,209 square feet in the full upper story. There is a finished basement of 1,925 square feet. The home also has an open frame porch of 312 square feet, a brick patio of 466 square feet, and a wood deck of 594 square feet. The house has four full baths and central air conditioning throughout. There is one masonry fireplace with one opening. There is also an attached garage that is 24 by 24. There is also a detached brick garage that measures 20 feet by 30 feet. It was just built and is in good condition with a grade of B-1.

What is the total improvement value?



Occupancy		Story Height	Attic		Bsmt Crawl	
1	Single Family	[ ]	0 None	0 None	0	
2	Duplex	2 Bi-level	1 Unfinished	1 1/4	1	
3	Triplex		2 1/2 Finished	2 1/2	2	
4	4-6 Family		3 3/4 Finished	3 3/4	3	
5	M. Home	3 Tri-level	4 Finished	4 Full	4	
Construction		Base Area	Floor	Finished Living Area	Value	
1	Frame or Aluminum	7	2,329	1.0	2,329	\$141,000
2	Stucco	7	1,209	2.0	1,209	\$49,400
3	Tile					
4	Concrete Block					
5	Metal					
6	Concrete					
7	Brick	--		Attic		
8	Stone	--	1,925	Bsmt.	1,925	\$81,800
9	Frame w/Masonry	--		Crawl	----	
Roofing		TOTAL BASE			\$272,200	
Asphalt Shingles		Row-type Adjustment			100%	
Slate or Tile		SUB-TOTAL			\$272,200	
Metal		Floors			B 1 2	
Earth		Unfinished Interior [-]				
Slab		Extra Living Units [+]				
Sub & Joist		Rec. Room [+]				
Wood		Loft [+]				
Parquet		Fireplace [+]			\$4,300	
Tile		No Heating [+]				
Carpet		Full			Air Conditioning [+]	\$6,400
Unfinished		No Electric [+]				
Interior Finish		Plumbing			TF 14-5 = 9 X \$800	\$7,200
Plaster or Dry Wall		No Plumbing				
Paneling		Specialty Plumbing				
Fiberboard		SUB-TOTAL, ONE UNIT				
Earth		SUB-TOTAL UNITS				
No Electrical		Garages				
Accommodations		Integral				
Total Number of Rooms		Attached Garage			+	\$17,500
Bedrooms		Attached Carport			+	
Family Room		Basement			[+]	
Formal Dining Room		Exterior Features			\$23,500	
		SUB-TOTAL			\$331,100	
		Grade and Design Factor			100%	
		ADJUSTED SUB-TOTAL			\$331,100	
		Location Multiplier			92%	
		Replacement Cost			\$304,610	
Loft Area		Heat & Air Conditioning			Plumbing # TF	
Rec. Room Area		Central Warm Air			Full Bath 4 12	
Fire Place		Hot Water or Steam			Heat Pump	
Masonry		NO HEAT			Cooking Sink 1 1	
Metal		Gravity, Wall, Space			Water Heater 1 1	
		Central Air Cond.			Extra Feature	
		TOTAL			14	
		Extra Living Unit			Conversion #	
		Designed #			No Plumbing	

Cost Approach

HOUSE # 2

Vermillion County 0.92

Attached Garage 24 X 24 also brick (576 sq ft) \$17,500

Basement:  
 Unfin Bsmt 1,925 sq ft \$ 36,800  
 Bsmt Fin 1,925 sq ft \$ 45,000  
 \$ 81,800

Open Frame Porch 312 square feet \$9,400  
 Brick Patio 466 square feet \* \$6,100  
 Wood Deck 594 square feet \* \$8,000  
 \$23,500

\* Brick Patio 466 - 400 = 66 so add for an additional 100 sq. feet \$4,900 + \$1,200 = \$6,100  
 \* Wood Deck 594 - 400 = 194 so add for 200 square feet \$5,600 + \$2,400 = \$8,000

Air Conditioning  
 1st floor \$4,600  
 2nd Floor \$1,800  
 \$6,400

SUMMARY OF NON-RESIDENTIAL IMPROVEMENTS

Det Garage that is Brick 20 X 30 - 600 square feet Base Price \$35.53  
 Adjust for Grade of B-1 115%  
 Base Rate \$40.86

SUMMARY OF RESIDENTIAL IMPROVEMENTS

ID	Use	Story Hgt.	Const. Type	Grade	Year Const.	Eff Age	Cond.	Base Rate	Features	L / M	Adj. Rate	Size or Area	Replacement Cost	Total Depr.	Remainder Value	% Comp	Nhbd Factor	Improvement Value
01	Dwelling	2.0	Br	C	1993		Avg						\$304,610	24%	\$231,500		1.03	\$238,400
02																		
03																		
04																		
05																		
06																		
07																		
Supplemental Card Residential Improvement Total															\$238,400			

SUMMARY OF NON-RESIDENTIAL IMPROVEMENTS

ID	Use	Story Hgt.	Const. Type	Grade	Year Const.	Eff Age	Cond.	Base Rate	Features	L / M	Adj. Rate	Size or Area	Replacement Cost	Total Depr.	Remainder Value	% Comp	Nhbd Factor	Improvement Value
01	Det garage	1.0	Br	B-1	2020		Good	\$40.86			0.92	\$37.59	600	\$22,550	0%	\$22,550	1.03	\$23,200
02																		
03																		
04																		
05																		
06																		
07																		
Supplemental Card Non-Residential Improvement Total															\$23,200			

Data Collector / Date

Appraiser / Date

Supplemental Card Non-Residential Improvement Total

Total Non-Residential Improvement Value \$23,200



# Cost Approach

This concludes the cost approach tutorial and is a reminder that should you have questions you can email these questions to the DLGF.

Please send emails to [Level1@dlgf.in.gov](mailto:Level1@dlgf.in.gov)

