Cost Approach

Level I--Dwelling/Yard Structures Answers

# 1.)	1500 square foot basement. 850 square feet is finished.		
	price for 1500 square foot basement unfinished PLUS		$23,100
	price for 850 square feet of finish in basement		$17,000
	App C, page 3 for 1500, page 2 for 850		$40,100
# 2.)	1400 square foot one story frame house with one		$70,700
	increment of brick.		$1,200
	Value for increment and home		$71,900
	Chapter 3, page29 for brick increment explanation		
	Appendix C, page 2 for value		
# 3.)	Brick two story home		
	2500 square feet on first floor		$124,700
	1750 square feet on second floor		$71,900
	2500 square feet unfinished basement		$34,300
	Appendix C, page 2		$230,900
# 4.)	Ready to install plumbing fixtures		
	RCN of home		$195,700
	percent complete Appendix C, page 5		83%
			$162,431
	Round		$162,400
# 5.)	Basement Rec Room with ceiling & floor finish		
	968 square feet		
	Rec Room Value		$2,400
	This is a Rec Room 1--Chapter 3, Page 31-Table 3-11		
# 6.)	Add for A/C based on Problem 3 square footage		
	2500 square feet on first floor		$3,900
	1750 square feet on second floor		$1,900
	Total A/C		$5,800
	Appendix C, Page 6		
# 7.)	What needs to be added for plumbing for house in #3?		
	2 full baths 3 fixtures in each one =	6	
	2 half bath 2 fixtures in each one=	4	
	1 kitchen sink 1 fixture allowed	1	
	1 water heater 1 fixture allowed	1	
		12	
	Less number allowed in pricing in App C	-5	
	Number of fixtures to add for	7	
	Price to add from App C page 7	$700	
	Total value to add 7 fixtures X $700	$4,900	$4,900
# 8.)	Attached Brick Garage for House in # 3		
	20 by 22 440 square feet		
	Value to add for Garage From App C, page 7		$10,600

# 9.)	House in problem has exterior features			
	Brick Patio 650 square feet			$7,900
	Open Masonry Porch 348 square feet			$8,800
	Stoop, 80 square feet			$1,800
	All values come from App C page 9			$18,500
	Brick Patio			
	Schedule only goes to 400 square feet & we have 650			$4,600
	We have 250 more feet than schedule			
	For every 100 square feet we add $1,100			
	250 divided by 100 = 2.5 rounds to 3			
	3 times $1,100 =			$3,300
	TOTAL			$7,900
# 10.)	Quality grade factor of B-1 is what percent?			115%
	App C, page 9 at the bottom			
# 11.)	Detached Frame Garage			
	30 by 50	1500 square feet	$15.90	
	Dirt Floor		-$3.10	
			$12.80	
	Grade C-1		95%	
			$12.16	
	Fayette County	L/M = .95	95%	
	Adjusted base rate?			$11.55
	App C, Page 13			
# 12.)	Fiberglass Swimming Pool--In ground			
	16 by 40	640 square feet	$27.00	
	Underwater lighting		$0.80	
	Electric heat		$6.50	
			$34.30	
	Grade B-1		115%	
			$39.45	
	L/M Marshall County		1.08	
	Adjusted Base Rate			$42.61
	App C, Page 14			

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	3 Tri-level	2 1/2 Finished	2 1/2 2
4 4-6 Family		3 3/4 Finished	3 3/4 3
5 M. Home 0 Row-type		4 Finished	4 Full 4

IMPROVEMENT DATA AMD COMPUTATIONS

Cost Approach — HOUSE #1

Effective Quality 95%

Construction		Base Area	Floor	Finished Living Area	Value
1 Frame or Aluminum	1	1,173	1.0	1,173	$61,300
2 Stucco					
3 Tile					
4 Concrete Block					
5 Metal					
6 Concrete					
7 Brick	--		Attic		
8 Stone	--		Bsmt.		
9 Frame w/Masonry	--		Crawl	-----	

Open Frame Porch 149 square feet $4,000
$4,000

Det Garage 22 X 20 Concrete Block $23.40
C+1 Grade 105%
Base Rate $24.57

A/C
First Story $1,900
$1,900

Roofing			
Asphalt Shingles		TOTAL BASE	$61,300
Slate or Tile		Row-type Adjustment	100%
Metal		SUB-TOTAL	$61,300
Floors	B 1 2	Unfinished Interior [-]	
Earth			
Slab		Extra Living Units [+]	
Sub & Joist		Rec. Room [+]	
Wood		Loft [+]	
Parquet		Fireplace [+]	
Tile		No Heating [+]	
Carpet		Air Conditioning [+] Full	$1,900
Unfinished		No Electric [+]	
Interior Finish	B 1 2	Plumbing TF 5 - 5 = 0 x $700	
Plaster or Dry Wall		No Plumbing [+]	
Paneling		Specialty Plumbing [+]	
Fiberboard		SUB-TOTAL, ONE UNIT	
Earth		SUB-TOTAL UNITS	
Unfinished		Garages	
No Electrical		Integral [-]	
Accommodations		Attached Garage [+]	
Total Number of Rooms		Attached Carport [+]	
Bedrooms		Basement [+]	
Family Room		Exterior Features	$4,000
Formal Dining Room		SUB-TOTAL	$67,200
		Grade and Design Factor	115%
		ADJUSTED SUB-TOTAL	$77,280
		Location Multiplier	95%
		Replacement Cost	$73,420
		Heat & Air Conditioning	Fuel Type # TS
		Central Warm Air	Fuel Early 01 3
		Hot Water or Steam	Heat Equip.
Loft Area		Heat Pump	Space Heat 1 1
Rec. Type		NO HEAT	Individual Unit
Area		Gravity,Wall,Space	Electric Heat 06
Fire Place Stacks		Central Air Cond.	TOTAL 5
Masonry		Extra Living Unit Conversion #	
Metal Openings		Designed #	No Plumbing

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
Residential	Drive-thru
	No Roof
BOAT HOUSE T/G/D/Q	Floor
Open Side	GRANARIES
CAR SHED T/G/D	L
Open/Enclosed	Storage Bins
Back-To-Back	Pole Type
Stall Walls	GRAIN BINS
DETACH GARAGE T/G/D/L/Q	Diameter & Height or Bushel Capacity
GREENHOUSE G	QUONSET BUILDING E/I/H
Free Standing	Floor:Asph/Conc
Attached at End	SLURRY TANKS
Lean-to	In/above ground
STABLES T/G/D/L	Round/Rectangle
SWIMMING POOL T	Plank / No Cover
Underwater Lighting	SILO
Tile: Ceramic/Plastic	Concrete:
Filter	Conc.Stave/Reinf'd
Heater	Masonry:
Non-Rect.Shape	Tile/Conc.. Blk/Brick
Concrete Apron	Steel:
Enclosure Type	Unlined/Glass Lined
TENNIS COURT Clay/Sod/Asphalt	No Roof
UTILITY SHED T/G	TRENCH AND BUNKER
	SILO
	Depth
	Width

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		Good						$73,420	30%	$51,390		1.01	$51,900
02	Det Gar	1.0	CB	C+1	1990		Avg	$24.57		0.95	$23.34	440	$10,270	8%	$9,450		1.01	$9,500
03																		
04																		
05																		
06																		
07																		

Supplemental Card Residential Improvement Total

Total Residential Improvement Value $61,400

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																		
02																		
06																		
07																		

Data Collector / Date

Appraiser / Date

Supplemental Card Non-Residential Improvement Total

Total Non-Residential 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 Tri-level		3 3/4 Finished		3 3/4	3
5 M. Home 0	Row-type			4 Finished		4 Full	4

Construction		Base Area	Floor	Finished Living Area	Value
1 Frame or Aluminum	7	2,329	1.0	2,329	$117,400
2 Stucco	7	1,209	.5	1,209	$36,300
3 Tile					
4 Concrete Block					
5 Metal					
6 Concrete					
7 Brick	--		Attic		
8 Stone	--	1,925	Bsmt.		$28,000
9 Frame w/Masonry	--		Crawl	-----	

Roofing		
Asphalt Shingles	TOTAL BASE	$181,700
Slate or Tile	Row-type Adjustment	100%
Metal	SUB-TOTAL	$181,700
Floors B 1 2	Unfinished interior [-]	
Earth	Extra Living Units [+]	
Slab	Rec. Room [+]	
Sub & Joist	Loft [+]	
Wood	1 may be more room Fireplace [+]	$2,400
Parquet	No Heating [+]	
Tile	Full Air Conditioning [+]	$4,600
Carpet	No Electric [+]	
Unfinished	Plumbing TF 1 1-5 = 6 X $700	$4,200
Interior Finish B 1 2	No Plumbing [+]	
Plaster or Dry Wall	Specialty Plumbing [+]	
Paneling	SUB-TOTAL, ONE UNIT	
Fiberboard	SUB-TOTAL UNITS	
Earth	Garages	
Unfinished	Integral [-]	
No Electrical	Attached Garage [+]	$13,100
Accommodations	Attached Carport [+]	
Total Number of Rooms	Basement [+]	
Bedrooms	Exterior Features	$20,200
Family Room	SUB-TOTAL	$226,200
Formal Dining Room	Grade and Design Factor	105%
	ADJUSTED SUB-TOTAL	$237,510
	Location Multiplier	1.08
	Replacement Cost	$256,510
	Heat & Air Conditioning	Plumbing -8 -10
	Central Warm Air	Full Bath 3 9
	Hot Water or Steam	Half Bath
Loft Area	Heat Pump	Extra Fixture
Rec. Type	NO HEAT	Add Bath 1 11
Area	Gravity,Wall,Space	Add Half Bath
Fire Place Stacks	Central Air Cond.	06
Masonry Openings	Extra Living Unit Conversion #	TOTAL 07
Metal	Designed #	No Plumbing

IMPROVEMENT DATA AMD COMPUTATIONS

Cost Approach HOUSE # 2

Location Multiplier 1.08

Attached Garage 24 X 24 also brick $13,100

Open Frame Porch 312 square feet $6,700
Brick Patio 466 square feet $5,700
Wood Deck 594 square feet $7,800
$20,200

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

SUMMARY OF NON-RESIDENTIAL IMPROVEMENTS

Det Garage that is Brick 20 X 30 600 square feet Base Rate $24.35
Adjust for Grade of B-1 115%
Base Rate $28.00

Air Conditioning
1st floor $3,500
Half story $1,100
$4,600

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
Residential	Drive-thru
	No Roof
BOAT HOUSE	Floor
T/G/D/Q	GRANARIES
Open Side	L
CAR SHED	Storage Bins
T/G/D	Pole Type
Open/Enclosed	GRAIN BINS
Back-To-Back	Diameter & Height
Stall Walls	or Bushel Capacity
DETACH GARAGE	QUONSET BUILDING
T/G/D/L/Q	E/I/H
GREENHOUSE	Floor:Asph/Conc
G	SLURRY TANKS
Free Standing	In/above ground
Attached at End	Round/Rectangle
Lean-to	Plank / No Cover
STABLES	SILO
T/G/D/L	Concrete:
SWIMMING POOL	Conc.Stave/Reinf'd
T	Masonry:
Underwater Lighting	Tile/Conc.. Blk/Brick
Tile: Ceramic/Plastic	Steel:
Filter	Unlined/Glass Lined
Heater	No Roof
Non-Rect.Shape	TRENCH AND BUNKER
Concrete Apron	SILO
Enclosure Type	Depth
TENNIS COURT	Width
Clay/Sod/Asphalt	
UTILITY SHED	
T/G	

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	1.5	Br	C+1	1989		Avg						$256,510	9%	$233,420		1.03	$240,400
02																		
03																		
04																		
05																		
06																		
07																		

Supplemental Card Residential Improvement Total
Total Residential Improvement Value $240,400

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	1995		Good	$28.00		1.08	$30.24	600	$18,140	2%	$17,780		1.03	$18,300
02																		
03																		
04																		
05																		
06																		
07																		

Data Collector / Date

Appraiser / Date

Supplemental Card Non-Residential Improvement Total

Total Non-Residential Improvement Value $18,300

Cost Approach

Problem Packet-Level I Answers

For problems 1, 2, and 3, assume the base rate for the lots is $100.

Number 1 **Standard lot for Neighborhood 1254 is 100 feet by 132 feet. Lot # 7 is 100 feet wide by 175 feet deep. What is the adjusted base rate and the estimated value of the lot?**

Look at Table 2-7: The factor for 175 feet on the 132 foot table is 1.12. Multiply 1.12 by the base rate of $100. The new adjusted base rate is now $112. Multiply that by the frontage of 100 (112 X 100). The estimated value is $11,200.

Number 2 **The standard lot for neighborhood 781 is 100 feet by 150. Lot #12 is 125 feet wide by 175 feet deep. What is the adjusted base rate and the estimated value of the lot?**

From Table 2-7: The factor for 175 feet on the 150 foot table is 1.07. Multiply 1.07 by the base rate of $100. The new adjusted base rate is then $107. Multiply that by the frontage of 125 feet ($107 X 125). The estimated value is $13,375 or $13,380 which then rounds to $13,400 to the nearest $100.

Number 3: **The Standard lot for Neighborhood 832 is 100 feet by 200 feet. Lot #61 is 100 feet wide by 175 feet deep. What is the adjusted base rate and the estimated value of the lot?**

From Table 2-7: The factor for 175 feet on the 200 foot table is .95. Multiply .95 by the base rate of $100. The new adjusted base rate is $95. Multiply that by the frontage of 100 (100 X $95). The estimated value is $9,500.

Cost Approach

Problem Packet-Level I Answers

For problems 4, 5, and 6, assume a Homesite value of $10,000, an excess acreage value of $2,500 per acre and a farmland value of $1,140 per acre with a productivity factor of 1.05.

Number 4: **A residential parcel contains 4 acres and is vacant. What is the estimated value of this parcel?**

Since this parcel is vacant, you multiply the excess acreage rate of $2,500 by the number of acres. ($2,500 X 4). The estimated value of the parcel is $10,000.

Number 5: **A residential parcel contains 10 acres and has a dwelling. Seven of the acres are being farmed. What is the estimated value of this parcel?**

		A	B	C	D	E		
Land Type	Soil ID	Meas Acres	Prod Factor	Base Rate	Adj Rate	Ext Value	Infl Factor	Land Value
4	RAH 1	7	1.05	$1,140	$1,197	$8,380		$8,380
								$0
								$0

1 acre for homesite		1			$10,000	$10,000		$10,000	
2 acres excess		2			$2,500	$5,000		$5,000	
		GRAND TOTAL						$23,380	$23,400

B TIMES C EQUALS D
A TIMES D EQUALS E

Number 6: **A residential parcel contains 5 acres, and has no dwelling. It is being farmed until construction on a new home starts. What is the estimated value of this parcel?**

Land Type	Soil ID	Meas Acres	Prod Factor	Base Rate	Adj Rate	Ext Value	Infl Factor	Land Value
4	RAH1	5	1.05	$1,140	$1,197	$5,990		$5,990
								$0
								$0

Homesite		1				$0		$0	
Excess Acres						$0		$0	
		GRAND TOTAL						$5,990	$6,000

Cost Approach

Problem Packet-Level I Answers

For problems 7, 8, and 9 use Table 2-11 on Page 73, of Chapter 2

Number 7: **A .70 acre tract is located in a neighborhood where 1 acre tracts are valued at $25,000 per acre. What is the estimated value of this parcel?**

Going to Table 2-11, the factor for .70 acres is 1.32. Multiply the factor times the rate per acre and then multiply that answer by the amount of acreage. (1.32 X $25,000 = $33,000. $33,000 times .70 = $23,100. Estimated Value

Number 8: **A .94 acre tract is located in a neighborhood where 1 acre tracts are valued at $55,000 per acre. What is the estimated value of this parcel?**

Going to Table 2-11, the factor for .94 acres is 1.06. Multiply the factor times the rate per acre and then multiply that answer by the amount of acreage. (1.06 X $55,000 = $58,300. $58,300 times .94 = $54,800. Estimated Value

Number 9: **A .28 acre tract is located in a neighborhood where 1 acre tracts are valued at $40,000 per acre. What is the estimated value of this parcel?**

Going to Table 2-11, the factor for .28 acres is 1.91. Multiply the factor times the rate per acre and then multiply that answer by the amount of acreage. (1.91 X $40,000 = $76,400. $76,400 times .28 = $21,400. Estimated Value

Cost Approach

Practice Problem # 1 Answer

Detached Frame Garage		600 square feet	
Dirt Floor			
Grade		C-1	
Location Multiplier Jay County		0.96	
Neighborhood Factor		0.93	
Built		1954	
Condition		Fair	
Detached garage--base price			$19.90
Less Dirt Floor			-$3.10
			$16.80
Grade	C-1		95%
			$15.96
L/M			96%
			$15.32
Square footage			600
RCN			$9,190
Depreciation App B page 12			0.38
			$5,700
Times Neighborhood Factor			93%
True Tax Value of Improvement			$5,300

Cost Approach

Practice Problem # 2 Answer

Farm Ground Pricing

		A	B	C	D	E		F
Land Type	Soil I.D.	Measured Acres	Productivity Factor	Base Rate	Adjusted Rate	Extended Value	Influence Factor	Land Value
4		7.00	1.04	$1,400	$1,456	$10,190		$10,190
4		10.00	0.91	$1,400	$1,274	$12,740		$12,740
4		30.00	1.07	$1,400	$1,498	$44,940		$44,940
4		4.00	0.96	$1,400	$1,344	$5,380		$5,380
4		132.00	1.02	$1,400	$1,428	$188,500		$188,500
Supplemental Card							Supplemental Card	
Measured Acreage		183.00					LAND VALUE	$261,750

B TIMES C EQUALS D

A TIMES D EQUALS E

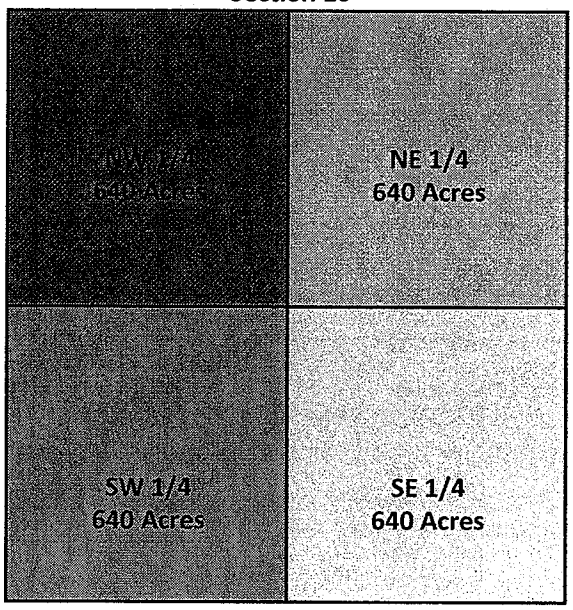
F IS ROUNDED TO THE NEAREST $10.00

Cost Approach

Practice Problem # 4

Combination Legal Description and Depth Chart Calculations

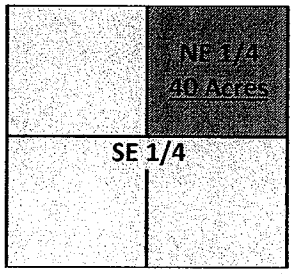
Section 10



NW1/4 NE1/4 SE1/4 OF SECTION 10
READ DESCRIPTION FROM RIGHT TO LEFT

ALL 4 QUARTERS EQUALS 640 ACRES

1.) HOW MANY ACRES IN THE ABOVE DESCRIPTION?
2.) HOW MANY SQ. FT. IN THE ABOVE DESCRIPTION?



40 Acres

NW 1/4 NE 1/4 SE 1/4

1.) 10 Acres
2.) 435,600 Square Feet

Cost Approach

Practice Problem # 4 (A)

Combination Legal Description and Depth Chart Calculations

Depth Chart Problem

For depth table calculations
Chapter 2 pages 54 etc.

First	Determine what the standard depth is.	132'
Second	Find that table	Chapter 2, page 55
Third	Find the factor in that table that relates to the depth of the lot you are pricing	1.06
Fourth	Take that factor and multiply it times the front foot price that is given to you	1.06 times $150
Fifth	This gives you the adjusted rate	$159
Sixth	Take this times the front foot of the lot you are pricing	$159 Times 125
Seventh	This gives you the price of the lot	$19,875

Example:

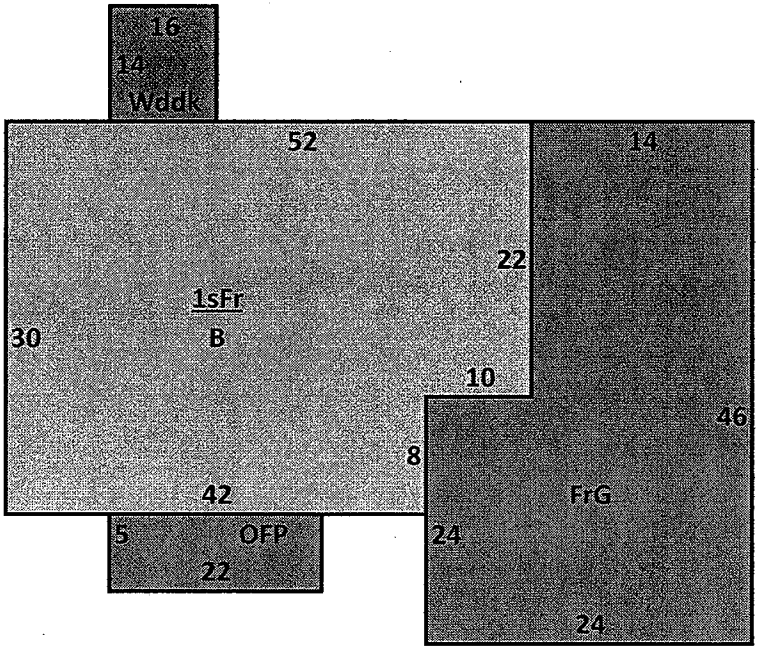
Standard lot size is 125 X 132
Lot we are pricing is 125 X 150
Front foot price is $150

Adjusted front foot price is	$159		
Lot values is	$19,875	Round to nearest $100	$19,900

Cost Approach

Practice Problem # 6 House # 1 Answer

Additional Square Foot Calculation Problems



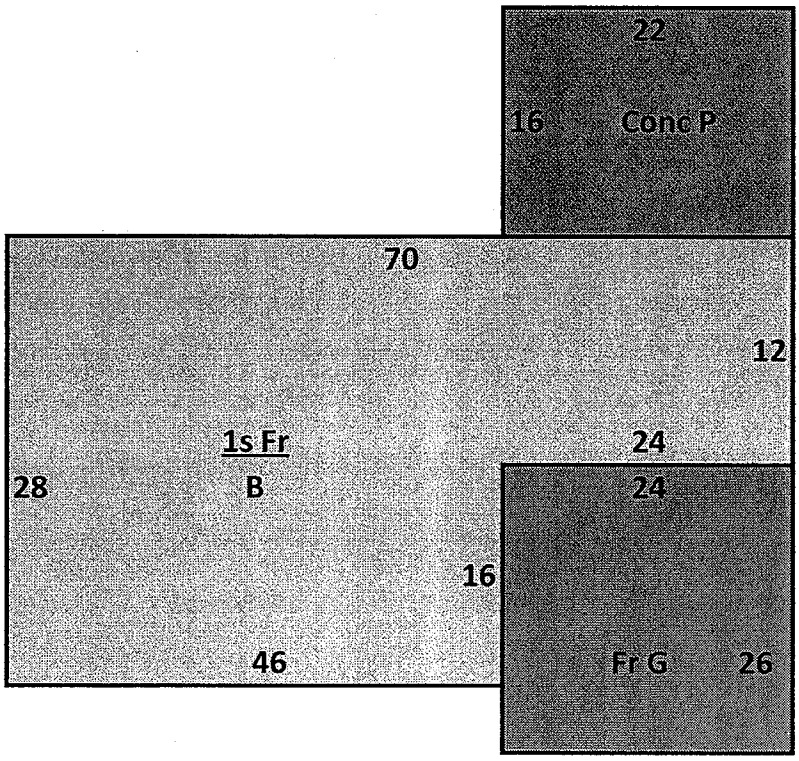
	Sq. Feet	Value
1sFr	1,480	$73,800
B	1,480	$22,800
FrG	884	$17,600
OFP	110	$3,000
Wddk	224	$3,300
TOTAL		$120,500

30 X 42 = 1,260 + 10 X 22 = 220 for total first story o	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
14 X 16 = 224 for a total square footage of	224

Cost Approach

Practice Problem # 6 House # 2 Answer

Additional Square Foot Calculation Problems



	Sq. Feet	Value
1sFr	1,576	$77,900
B	1,576	$24,000
FrG	624	$11,800
Conc P	352	$1,200
TOTAL		$114,900

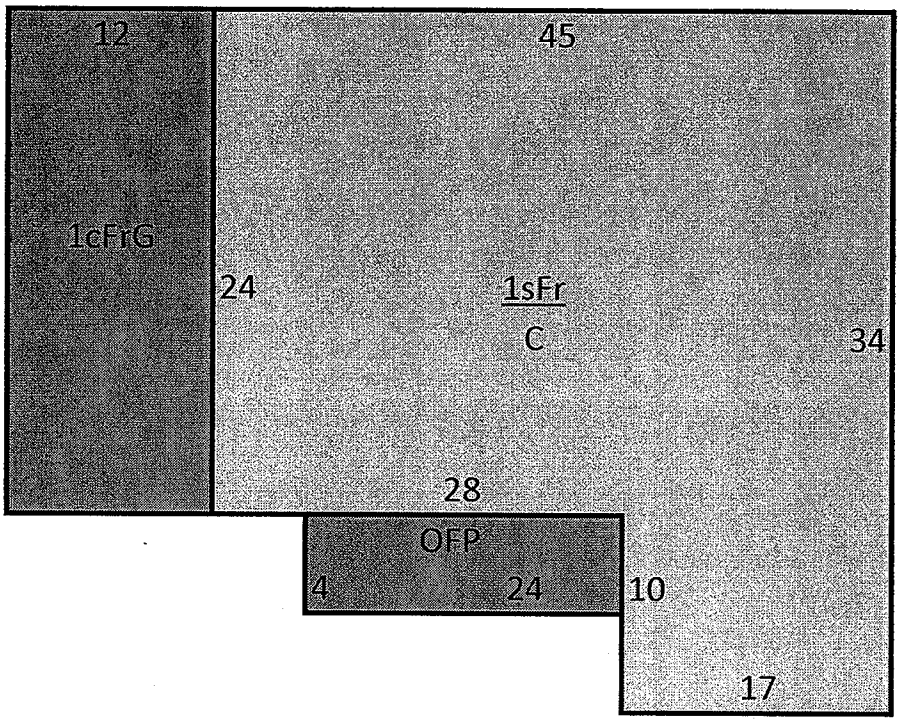
70 X 12 = 840 +
46 X 16 = 736 for a total square footage of 1,576
24 X 26 = 624

16 X 22 = 352

Cost Approach

Practice Problem # 6 House # 3 Answer

Additional Square Foot Calculation Problems



	Sq. Feet	Value
1sFr	1,250	$64,500
C	1,250	$6,700
1cFrG	288	$6,900
OFP	96	$3,000
TOTAL		$81,100

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