

► **Part Two: Multiple Choice**

Instructions: Write the letter of the correct answer.

- ____ 1. What is a fixed price based on the landscape work to be done?
- a. bid
 - b. cost summation
 - c. estimate
 - d. specification
- ____ 2. An accepted value for contingency costs is ____ percent.
- a. 1
 - b. 10
 - c. 30
 - d. 50
- ____ 3. An accepted value for profit is ____ percent.
- a. 2
 - b. 20
 - c. 30
 - d. 40
- ____ 4. What term describes a measurement of 3 feet long, 3 feet wide, and 3 feet high?
- a. linear foot
 - b. square foot
 - c. square yard
 - d. cubic yard
- ____ 5. Length in feet \times Width in feet = ____
- a. linear feet
 - b. square feet
 - c. cubic feet
 - d. cubic yard

► **Part Three: Short Answer**

Instructions: Complete the following.

1. How is a bid different from an estimate?

2. List five items found on a cost estimate.

SAMPLE LANDSCAPE CONSTRUCTION ESTIMATE SHEET

LANDSCAPE CONSTRUCTION ESTIMATE SHEET

JOB NAME			DATE		
JOB LOCATION			DESIGNER		
JOB DESCRIPTION					
Description	Quantity	Material Unit Cost	Total Material Cost	Total Labor Cost (\$15.00/hr.)	Total Material and Labor Costs
Plant List					
<i>Acer saccharum</i> 'Green Mountain,' 3" B&B	3	\$275.00	\$ 825.00	\$ 90.00	\$ 915.00
<i>Fothergilla gardenii</i> , 3-gal. container	12	16.00	192.00	60.00	252.00
Sod	235 yd.	2.10	493.50	180.00 (12 hours)	673.50
<i>Hedera helix</i> 'Thorndale,' 3" pot	300	0.58	174.00	45.00	219.00
Construction Materials					
Finish grading of site				525.00	525.00
Brick pavers, 6 cm	1,230	1.61	1,980.30		1,980.30
Sand, construction grade, 2" deep	3 tons	5.00	15.00		15.00
Gravel, grade 8, 3" deep	4 tons	6.00	24.00		24.00
Landscape fabric, 3' H 50' roll	3 rolls	9.95	29.85		29.85
Patio installation	300 sq. ft.			900.00 (\$3.00/sq. ft.)	900.00
Florida cypress mulch, 4" deep	10 yd.	36.95	369.50	90.00	459.50
Subtotal Costs (total material and labor costs)			\$4,103.15	\$ 1,890.00	\$5,993.15
Overhead Costs (total material and labor costs × 20%)					\$1,198.63
Contingency Costs (overhead + total material and labor costs × 10%)					\$ 719.18
Cost Summation (total material and labor costs + overhead + contingency)					\$7,910.96
Profit (cost summation × 20%)					\$1,582.19
TOTAL (cost summation + profit)					\$9,493.15

LANDSCAPE CONSTRUCTION ESTIMATE SHEET

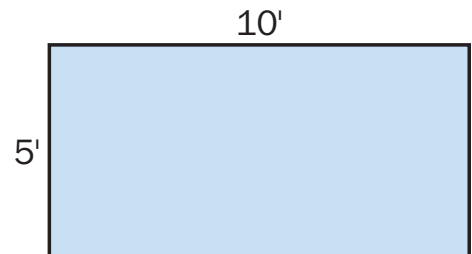
LANDSCAPE CONSTRUCTION ESTIMATE SHEET

JOB NAME				DATE	
JOB LOCATION				DESIGNER	
JOB DESCRIPTION					
Description	Quantity	Material Unit Cost	Total Material Cost	Total Labor Cost (\$15.00/hr.)	Total Material and Labor Costs
Plant List					
Construction Materials					
Subtotal Costs (total material and labor costs)					
	Overhead Costs (total material and labor costs × 20%)				
	Contingency Costs (overhead + total material and labor costs × 10%)				
	Cost Summation (total material and labor costs + overhead + contingency)				
	Profit (cost summation × 20%)				
	TOTAL (cost summation + profit)				

CALCULATING AREA

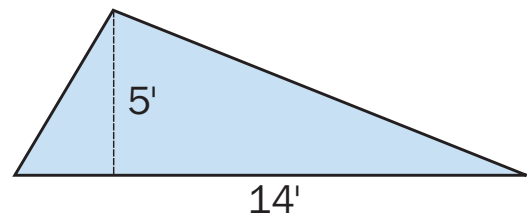
- ◆ Area of a rectangle or a square is equal to the length times the width.

- $\text{Length} \times \text{Width} = \text{Area}$
- $\text{Length } 10 \text{ ft.} \times \text{Width } 5 \text{ ft.} = 50 \text{ sq. ft.}$



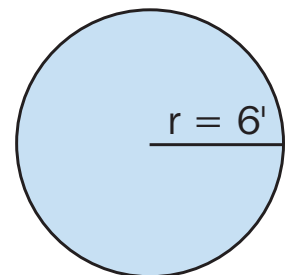
- ◆ Area of a triangle is equal to $\frac{1}{2}$ the base times the height.

- $\frac{1}{2} \times (\text{base} \times \text{height}) = \text{Area}$
- $\frac{1}{2} \times (14 \text{ ft.} \times 5 \text{ ft.}) = 35 \text{ sq. ft.}$



- ◆ Area of a circle is equal to the radius squared times pi. The radius (r) is half the diameter of the circle, and pi is a constant at 3.14.

- $r^2 \times \text{pi} = \text{Area}$
- $r^2 = 6 \text{ ft.} \times 6 \text{ ft.} = 36 \text{ sq. ft.}$
- $36 \text{ sq. ft.} \times 3.14 = 113.04 \text{ sq. ft.}$

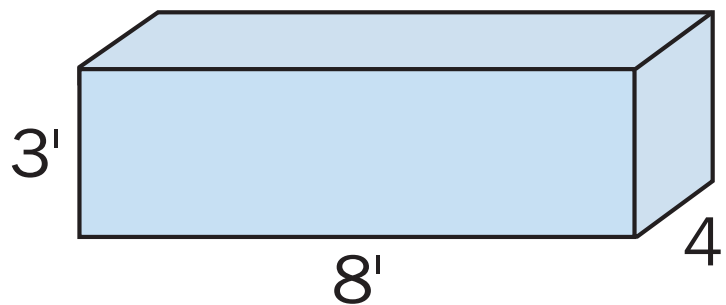


CALCULATING THE VOLUME OF A RECTANGLE

◆ The volume of a rectangle is the length times the width times the height.

■ $\text{Length} \times \text{Width} \times \text{Height} = \text{Volume}$

■ $8 \text{ ft.} \times 4 \text{ ft.} \times 3 \text{ ft.} = 96 \text{ cu. ft.}$



Landscape Cost Estimate

Instructions:

Use the following information to complete the Landscape Construction Estimate Sheet.

Hard Rock Landscaping Firm

Designer: R.R. River

Plan for Mr. And Mrs. B. Rubble

123 Lavender Lane

Concrete, Illinois 12345

Plant Material

5 sugar maples (*Acer saccharum*), 1¼" caliper, \$62 each and \$30 to install

10 dwarf boxwoods (*Buxus semevirens*), 2-gal. pot, \$15.65 each and \$8 to install

3 Miss Kim lilacs (*Syringa vulgaris* "Miss Kim"), 1-gal. pot, \$5.35 each and \$4 to install

5 Floribunda roses (*Rosa floribunda*), 18 inches, \$7.85 each and 9.82 to install

2 Eastern redbuds (*Cercis canadensis*), 1" caliper, \$51 each and \$30 to install

100 English ivy (*Hedera helix*), 2" pot, \$1.22 each and \$0.50 to install

Construction Materials

300 concrete pavers on 2-inch sand base, \$1.76 each and \$0.98 to install

Pine bark mulch, 8 yd. at \$23.45 each and \$10 to install

Wooden deck, \$2,000 plus \$900 to install



(Note: Overhead costs and profit should be calculated at 20 percent.)

Include a contingency cost at 10 percent.

LANDSCAPE CONSTRUCTION ESTIMATE SHEET

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Plant List					
Construction Materials					
Subtotal Costs (total material and labor costs)					
	Overhead Costs (total material and labor costs × 20%)				
	Contingency Costs (overhead + total material and labor costs × 10%)				
	Cost Summation (total material and labor costs + overhead + contingency)				
	Profit (cost summation × 20%)				
	TOTAL (cost summation + profit)				

Landscape Calculations

Instructions:

Answer the questions associated with the given problem.

Given:

Mr. Potter has moved into a recently built house. The house is on a lot measuring 93 feet by 145 feet. The house covers 2,315 square feet. The drive and entry walk cover 850 square feet. The landscape design calls for a wood deck measuring 32 feet by 18 feet.

Corner plantings, doorway plantings, shrub borders, and a high-interest planting near the deck total 2,750 square feet. The planting areas require a layer of cypress mulch 3 inches deep. The remainder of the property will be sodded.

Questions:

1. How large is the lot?
2. How much space do the house, drive, and entry walks occupy?
3. How large is the deck (in square feet)?
4. How many yards of mulch are needed for the planting beds?
5. How many square yards of sod will be needed for the job? (Add 10 percent for cutting and waste.)

