

National FFA Nursery/Landscape Career Development Event

Landscape Estimating 2017

Answer Key

Calculations illustrate possible solution methods – others may also apply.

1. C – $6' \times 2' = 12 \text{ sq. ft.}$
2. D – *Thuja occidentalis* cv. is the only pyramidal evergreen on the list.
3. A – 7 plants at \$22.00 = \$154.00 x 1.5 markup = \$231.00
 .25 hour x 7 plants = 1.75 hrs. @ \$15.00 = \$26.25 x 2 = \$52.50
 \$231.00 + \$52.50 = \$283.50
4. C – *Amelanchier arborea* is a small deciduous tree.
5. B – 1 hour each at \$15.00 x 2 = \$30.00
 Peat moss @ \$7.50/3 cu. ft., need 1 cu. ft. = \$2.50 x 1.3 markup = \$3.25
 \$30.00 + \$3.25 = \$33.25
6. A – $\frac{1}{2}$ circle with a 12' diameter, $6 \times 6 \times 3.14 = 113.04$ divided by 2 = 56.52 sq. ft.
7. D – *Pelargonium x hortorum* cv.
8. A – 8 plants per sculpture area, 16 total @ \$6.00 = \$96.00 x 1.5 = \$144.00
 16 plants taking 10 minutes each = 160 minutes divided by 60 = 2.67 hrs. @ \$15.00 = \$40.45
 x 2 = \$80.10
 \$144.00 + \$80.10 = \$224.10
9. A – $6' \times 6'$ square = 36 sq. ft. minus 2.5' diameter sculpture circle ($1.25' \text{ radius} \times 1.25 \times 3.14 = 4.9$). $36 - 4.9 = 31.1 \times 2$ sculpture areas = 62.2 sq. ft. x .25 (3" deep) = 15.55 cu. ft.
10. C – Square ft. measurement of a circle, Radius squared times 3.14. $3.14 \times 6 \times 6 = 113 \text{ sq. ft.}$
11. B – 19 shrubs @ \$12.00 = \$228.00 x 1.5 = \$342.00 + 10% (\$34.20) = \$376.20
 19 x .5 hrs. = 9.5 x \$30.00 = \$285.00.
 \$376.20 + \$285.00 = \$661.20
12. D – 5 sets of tables and chairs @ \$550.00 = \$2750.00 + 15% shipping = \$3162.50 x 1.5 = \$4743.75
 5 sets at 2.25 hrs. = 11.25 hrs. @ \$30.00 = \$337.50
 \$4743.75 + \$337.50 = \$5081.25
13. D – $10' \times 6' = 60 \text{ sq. ft.} + 2 \times 2' \times 2' (8 \text{ sq. ft.}) = 68 \text{ sq. ft.}$ $68 \times .67 (8/12) = 45.56 \text{ cu. ft.}$
14. D – All the plants listed are evergreen.
15. B – Dia. of hole +18". Area 9"sq. or $81 \times 3.14 = 254 \text{ sq. inches.}$ $254/144 \text{ Sq. inches} = 1.76 \text{ ft.}$
square = 5.29 cubic feet

16. C - 5' x 11' scale measurement
17. A - 8' + 30' + 38' = 76' scale measurement
18. B - 4 x 6" steps = 24"/H
19. A - Compacted sub base, sand, pavers
20. D. - Sum of areas = 18' x 44.5' = 801 sq. ft.

$$27' \times 14' = 378$$

$$2.5' \times 9.5' = 23.75 \text{ sq. ft.}$$

$$6' \times 3' = 18 \text{ sq. ft.}$$

$$\text{Triangle} - 2.5' \times 5' = 12.5 \text{ sq. ft.}$$

$$\text{Triangle} - 2.25' \times 6' = 13.5$$

$$\text{Total} \quad 1239.75 \text{ sq. ft.}$$

Deduction for vent grant -55 from question 16

$$\text{Total sq. ft.} = 1184.75 \times .25 (3/12) = 296.18 \text{ cu. ft.}$$