



NATIONAL FFA NURSERY/

LANDSCAPE ESTIMATING 2022

Answer Key

Calculations illustrate possible solution methods - others may also apply.

1. A – 3 – by count from plan
2. D - 13' wide, by scale
3. C – Cercis canadensis
4. B – \$192.00 - 4 trees, 1 hour each tree = 4 hours @ \$48.00 = \$192.00
5. B - \$1,181.40. 4 trees costing \$179.00 each + 10% = \$196.90 each cost x 1.5 markup = \$295.35 x 4 = \$1,181.40
6. D – None of the above. 13 plants @ 19.65 each x 1.5 = \$383.20 total
7. C – Taxus cv.
8. D - \$1,113.75. 22 plants @ \$33.75 with 10% quantity discount from \$37.50. Cost of plants = \$742.50 x 1.5 markup = \$1,113.75.
9. A – \$528.00. 22 plants @ ½ hour = 11 hours x \$48.00 = \$528.00
10. C – 8 cu. ft., one container interior measures by scale 2' square and 2' deep is given, $2 \times 2 \times 2 = 8$.

11. D - \$345.10. Each planter materials cost $\$101.50 \times 1.7 = \172.55×2 planter boxes = \$345.10.
12. B - \$259.40. 19 plants @ \$7.30 + 10% = \$152.57 cost x 1.7 markup = \$259.40
13. C - \$12,773.80. 8 sections total @ \$1,195.00 + 8% shipping = \$10,324.80 cost + 20% markup = \$12,389.80 for purchase of materials. 8 hours labor @ \$48.00 = \$384.00. Total purchase and installation = \$12,773.80
14. B – 3.87 hours. By scale – $7' \times 1.5' = 10.5 + 20.5' \times 5.5' = 112.75 + 15' \times 10.5' = 157.5$. $10.5 + 112.75 + 157.50 = 280.75$ reduced by 2.25 (1.5×1.5) = 277.25 sq. ft. @ 2" deep = 46.42 cu. ft. divided by 2 (cubic ft. per bag) = 23.2 bags installed at the rate of 6 bags per hour = 3.87 hours.
15. A – 506.50 sq. ft. By scale, sections are: $10' \times 7'$, $2' \times 7'$, $3' \times 4'$, $7' \times 36.5'$, and $15.5' \times 10'$. $70 + 14 + 12 + 255.5 + 155 = 506.50$
16. A – \$306.90. 18 plants @ \$15.50 + 10% = \$306.90 total cost
17. C – 6' by scale
18. D – \$1,787.00. 144 plants shown on plan @ \$7.30 = \$1,051.20 x 1.7 markup = \$1,787.00
19. B - \$458.25. By scale, sections are $24' \times 10'$ (240) + $17.5' \times 5.5'$ (96.25) + $30.5' \times 6.5'$ (198.25) + $11.5' \times 2'$ (23) = 557.5 sq. ft. Subtracting sections of $3' \times 3'$ (9) + $9' \times 5.5'$ (49.5), semi-circle of $18' \times 1.75'$ (31.5) = 90 sq. ft. $557.5 - 90 = 467.5$ sq. ft. @ 2 inches deep = 77.92 cu. ft. divided by 2 (cu. ft. of mulch per bag) = 39 bags @ \$2.50 = \$97.50 x 1.5 markup = \$146.25. Labor of 6.5 hours from 6 bags installed per hour. \$48.00 per hour = \$312.00. Material (\$146.25) + Labor (\$312.00) = \$458.25
20. C - \$11,889.40. 12 chairs @ \$480.00 + 8% = \$6,220.80. 3 tables @ \$860.00 + 8% = \$2,786.40. $\$6,220.80 + \$2,786.40 = \$9,007.20$ x 1.3 markup = \$11,709.40. Labor @ 15 minutes per item (15 items) = 3.75 hours @ \$48.00 = \$180.00. Materials + labor = \$11,709.40 + \$180.00 = \$11,889.40.