

## 2022 ENMU Invitational Horticulture Produce Math Test

1. Sally hired a friend to do some landscaping for her. He charges her his normal rate of \$15 an hour. He completes a full 8-hour day. Before she calculates how much she owes, he insists on giving her a 24% discount of his services. How much does she own him?
  - a. \$98.39
  - b. \$120
  - c. \$91.20
  - d. \$28.80
2. Sweet Corn plant population is approximately 18,000 plants per acre. Using this average, calculate how many plants we should expect to harvest from an 90 acre plot?
  - a. 2
  - b. 1,520,000
  - c. 1,620,000
  - d. 200
3. Samantha harvested 3.5 tons of barley. If there is a harvest loss of 7% how many pounds of barley were harvested?
  - a. 490
  - b. 2,900
  - c. 6,510
  - d. 5,700
4. You have a pesticide to apply to your 4.5-acre tomato patch. The application rate is .7 Liter per acre over a 24-hour period. How many liters are needed for the tomato patch?
  - a. 3.15 Liters
  - b. 1.2 Liters
  - c. 25 Liters
  - d. 3 Liters
5. You are helping your grandmother build a raised bed garden consisting of four separate boxes. Each of the boxes measure 5feet X 7feet. How may Square feet of garden will your grandma have once all four boxes are completed?
  - a. 96
  - b. 140
  - c. 155
  - d. 132
6. Your apple tree produced 142 pounds of apple last year and you were able to sell all of them at the local farmers market for \$2.76 per pound. What was your gross income from the apple tree?
  - a. \$352.70
  - b. \$250.40
  - c. \$391.92
  - d. \$332.35

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7. Upon making a purchase for several different plants at a local greenhouse, Jo's final bill was \$567.93. When asking for a discount, the owner offered a \$ 50 discount for advertising her local business or a 15% if Jo pays cash. What is the amount Jo will pay if he pays in cash?
  - a. \$502.03
  - b. \$482.74
  - c. \$482.78
  - d. \$491.73
8. Your anticipated yield for Wheat is 45 bushels per acre. Assuming there is a 5% harvest loss, how many bushels of wheat will be harvested from a 172-acre farm?
  - a. 7,353 bushels
  - b. 7,740 bushels
  - c. 387 bushels
  - d. 4,656 bushels
9. A recent soil test reveals that you need to add 100 pounds of phosphorus per acre to your 3-acer avocado orchard. You are at the local fertilizer dealer price checking different brands of fertilizer. Curtis and Curtis sells a 50-pound bag of 20-20-20 for \$18.95, Abundance sells a 100-pound bag of 10-5-8 for \$13.50, Green Nutrient sells a 40-pound bag of 30-10-20 for \$16.00 and Not for Farmers sells a 50 lb. bag of 18-20-12 for \$31.30. Which fertilizer would be the most cost effective for you to achieve phosphorus levels dictated by the soil test?
  - a. Curtis and Curtis
  - b. Abundance Fertilizer
  - c. Green Nutrients
  - d. Not for farmers
10. You need 3 ounces of seed for your 25-acre beat patch. There are 6,500 seeds in an ounce. Assuming a 95% germination rate, how many plants can you expect?
  - a. 28,000
  - b. 19,000
  - c. 15,200
  - d. 18,525
11. You have 17 acres of cabbage planted, if the average yield per acer is 1300 pounds of cabbage. Approximately how many tons of cabbage will you be taking to market from your field?
  - a. 12
  - b. 11.05
  - c. 22100
  - d. 24000

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12. Using the fertilizer picture below, how many bags would you need to buy to get the 800 pounds of Nitrogen fertilizer your 100 yard by 100 yard apple orchard requires based on a recent soil test?
- a. 200
  - b. 20
  - c. 80
  - d. 12.5



13. If you were to use a 10-4-6 fertilizer with the rate of 1 pound of nitrogen per 1,000 square feet being the recommendation. How many pounds does a 4000 sq ft lawn need?
- a. 50 lb of fertilizer
  - b. 30 lb of fertilizer
  - c. 40 lb fertilizer
  - d. 60 lb fertilizer
14. Ruben wants to install a new in-ground, drip irrigation system. He knows that the water spouts need to be in 1.5-foot intervals. How many spouts would he need for a line that is 95 feet?
- a. 46.66
  - b. 170
  - c. 170.5
  - d. 47.5

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15. You have a 15-pound bag of herbicide. This herbicide contains 12% active ingredients. How many pounds of active ingredient are in the 15-pound bag?
- a. 1.32 pounds
  - b. 1.8 pounds
  - c. 18 pounds
  - d. 2.3 pounds