

2018 New Mexico FFA State Horticulture Produce Contest

Math Assessment & Solution

1. Your favorite local fruit stand is having a 15% off sale on muskmelons, when you buy two or more. To the nearest cent how much would it cost to purchase 3, two pound melons if the before sale price of \$.94 per pound?
 - A. \$4.79
 - B. \$5.64
 - C. \$4.80
 - D. \$2.82

2. You have been elected to serve as your chapter's greenhouse manager. As the greenhouse manager one of your responsibilities is ordering supplies. In order to meet the current demand for your chapter's garden ready plant sale you will need to order enough potting soil to fill: 100 green chili plant pots, 200 tomato plant pots, and 150 yellow squash plant pots. Both the green chili and tomatoes are planted in $\frac{1}{2}$ gallon pots, and the yellow squash is planted in a $\frac{1}{4}$ gallon pot. What is the minimum number of 2 cubic foot bags of potting soil need to order to fill all the garden ready plant pots?
 - A. 25
 - B. 12
 - C. 26
 - D. 13

3. You are helping your grandmother build a raised bed garden consisting of three separate boxes. Each of the boxes measure 4feet X 8feet. How many Square feet of garden will your grandma have once all three boxes are completed?
 - A. 16
 - B. 96
 - C. 32
 - D. 48

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4. Your greenhouse thermometer says its 93 degrees Fahrenheit, how many degrees is that in Celsius to the nearest 100th of a degree?
- A. 34
 - B. 33.9
 - C. 33.89
 - D. 33.889
5. You are making a 16 cup fruit salad and the recipe calls for 5mL of fruit fresh per 2 cups fruit. How many teaspoons of fruit fresh will you need to complete your recipe?
- A. 16
 - B. 10
 - C. 8
 - D. 40
6. The world's largest pumpkin was harvested on October 9th 2016 in Belgium and weighed 1,190.49kg. How many pounds to the nearest 10th of a pound would that equal?
- A. 2,624.6
 - B. 2625
 - C. 2381
 - D. 2625.03
7. Your apple tree produced 153 pounds of apples last year and you were able to sell all of them at the local farmers market for \$2 per pound. What was your gross income from the apple tree?
- A. \$153
 - B. \$306
 - C. \$76
 - D. \$290.70

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Math Assessment & Solution

For Questions 8 & 9 use the attached seeding chart out of *All About Vegetables*.

8. According to the seeding chart provided what is the minimum number of sweet corn seeds you should plant in a 125 foot row?
 - A. 375
 - B. 750
 - C. 125
 - D. 500

9. What is the maximum number of Asparagus you should plant in two 45 foot rows that are 36 inches apart?
 - A. 2.5
 - B. 30
 - C. 60
 - D. 2

10. If Gala apples cost \$1.54 per pound and Fuji apples cost \$1.60 per pound how much more would it cost to buy 5 pounds of Fuji apples than it would to buy 5 pounds of Gala apples?
 - A. \$8.00
 - B. \$0.30
 - C. \$7.70
 - D. \$0.06

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11. How many of the above bags of fertilizer will you need to buy to get the 800 pounds of Nitrogen fertilizer your 100 yard by 100 yard apple orchard requires base on a resent soil test?
- A. 200
 - B. 20
 - C. 80
 - D. 12.5
12. 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. Southern Ag sells a 50 pound bag of 20-20-20 for \$18.95, Milorganite sells a 100 pound bag of 10-5-8 for \$13.50, Scotts sells a 40 pound bag of 30-10-20 for \$16.00 and Lesco sells a 50lb 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. Southern Ag
 - B. Milorganite
 - C. Scotts
 - D. Lesco

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13. You have 12 acres of cabbage planted, if the average yield per acer is 1250 pounds of cabbage. Approximately how many tons of cabbage will you be taking to market from your field?
- A. 15,000
 - B. 12
 - C. 24,000
 - D. 7.5
14. You are working on a triangular shaped field and need to know the square yardage. If the field has a 90 degree corner with a 200 foot north boundary and a 600 foot east boundary approximately how many square yards is the field?
- A. 60,000
 - B. 20,000
 - C. 13,333
 - D. 6,667
15. There are approximately 235 bi colored golden jubilee sweet corn seeds in a pound. Approximately how many seeds are there in a 6.5 ounce pack?
- A. 95
 - B. 15
 - C. 36
 - D. 127

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