

Name _____ Classroom Teacher _____

Unit 9 Enrichment Assignment

Directions: Answer each of the questions in this packet and show your work. You may use your notes, ask questions, work with another student, or go to the math lab to get help on this. You will be given a quiz based on these questions in which you will have to explain or interpret your answers.

Use this space to show work.

1. Lauren and Christy made a total of \$19.30 selling cookies and lemonade. The equation below describes the relationship between the number of cookies sold, x , and the number of glasses of lemonade sold, y .

$$0.5x + 1.1y = 19.3$$

What do the coefficients 0.5 and 1.1 represent?

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|---|---|
| A. Lauren and Christy sold cookies for \$0.50 each and glasses of lemonade for \$1.10 each. | B. Lauren and Christy made \$1.10 selling cookies and \$0.50 selling glasses of lemonade. |
| C. Lauren and Christy made \$1.60 per sale. | D. Lauren and Christy sold 0.5 cookies and 1.1 glasses of lemonade. |

2. A line with a slope of 4 passes through the point (1, 3). What is the equation of this line?

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|---------------------------|---------------------------------|
| A. $y + 4 = \frac{1}{3}x$ | B. $y - 1 = \frac{1}{3}(x - 3)$ |
| C. $y = 4x - 1$ | D. $y = 3x + 1$ |

3. What is the lower quartile of the following data set?

8, 12, 18, 10, 20, 21, 11, 14, 14, 17, 22

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|-------|-------|
| A. 20 | B. 11 |
| C. 14 | D. 4 |
4. In 1994, a purse shop sold 2,237 purses. By 2002 this shop sold 7,862 purses. What was the average rate of change for the sale of purses?
- | | |
|-------------------|--------------------|
| A. 5,625 per year | B. 873 per year |
| C. 703 per year | D. 10,099 per year |

Use this space to show work.

5. Susan was buying a total of 8 binders and tablets. Each binder costs 3 dollars and each tablet costs 2 dollars. If Susan spent a total of 19 dollars, how many of each did she purchase?
- A. 4 binders and 4 tablets B. 3 binders and 5 tablets
C. 5 binders and 3 tablets D. 2 binders and 6 tablets
6. What value is x if $\sqrt{50x}$ simplifies to $10\sqrt{2}$?
- A. 6 B. 4
C. 5 D. 3
7. What value is x if $\sqrt{x}$ simplifies to $5\sqrt{6}$?
- A. 220 B. 180
C. 150 D. 60
8. Randy is going to mow the square yard of his neighbor. To be able to give the fee he will charge, he needs to find the area of the yard with a side of $30\sqrt{10}$ yards. How many square yards is the job?
- A. 9020 square yards B. $900\sqrt{100}$ square yards
C. $900\sqrt{10}$ square yards D. 9000 square yards
9. Dan is fencing a yard for his new puppy. The yard is $6\sqrt{7}$ feet in width and $3\sqrt{49}$ feet in length. How many total feet of fencing will Dan need for this rectangular yard?
- A. $42 + 12\sqrt{7}$ feet B. $21 + 6\sqrt{7}$ feet
C. $54\sqrt{7}$ feet D. $27\sqrt{7}$ feet
10. A line passes through the points (1, 6) and (0, 8). What is the equation of this line?
- A. $y = -2x + 8$ B. $y = 2x - 8$
C. $y = 8x - 2$ D. $y = -2x + 6$