

Directions: This is practice for the end of course exam. You need to read each question carefully and answer each part completely. When a question asks you to explain that means you need explain using words not just your work for the problem. Your work will be scored based on the rubric below.

Rubric:

- 4 A response at this level provides evidence of thorough knowledge and understanding of the subject matter.**
- The response addresses all parts of the question or problem correctly.
 - The response demonstrates efficient and accurate use of appropriate procedures.
 - The explanation of strategies used in the response shows evidence of a good understanding of mathematical concepts and principles, and it does not contain any misconceptions.
 - The explanation in the response is clear and coherent.
- 3 A response at this level provides evidence of competent knowledge and understanding of the subject matter.**
- The response addresses most parts of the question or problem correctly.
 - The response includes some minor errors but generally uses appropriate procedures accurately.
 - The explanation of strategies used in the response shows some evidence of a good understanding of mathematical concepts and principles, and it contains few, if any, misconceptions.
 - The explanation in the response is mostly clear and coherent.
- 2 A response at this level provides evidence of a basic knowledge and understanding of the subject matter.**
- The response addresses some parts of the question or problem correctly.
 - The response includes a number of errors but demonstrates some use of appropriate procedures.
 - The explanation of strategies used in the response shows a little evidence of understanding of mathematical concepts and principles, but it may contain some evidence of misconceptions.
 - The explanation in the response is partially clear, but some parts may be difficult to understand.
- 1 A response at this level provides evidence of minimal knowledge and understanding of the subject matter.**
- The response addresses a few parts of the problem correctly, but the response is mostly incorrect.
 - The response includes inappropriate procedures or simple manipulations that show little or no understanding of correct procedures.
 - The explanation of strategies used in the response shows little or no evidence of understanding of mathematical concepts and principles, and it may contain evidence of significant misconceptions.
 - Many parts of the explanation are difficult to understand.
- 0 A response at this level is not scorable.** The response is off-topic, blank, hostile, or otherwise not scorable.

1) Neal is working with absolute value equations.

- A. Find the solutions to the equation $|3x - 2| = 11$. Show your work algebraically, and explain how you found your answer.
- B. Check your solutions from Part A. Show your work algebraically, and explain how you know your solutions are correct.
- C. Neal finds that the equation $|x + 2| = -4$ has no solutions. Explain why Neal is correct.
- D. Find all values of a for which the equation $|5 - x| - 6 = 3 + a$ has at least 1 solution. Show your work algebraically, and explain why your answer is correct.

- 1) Mr. and Mrs. Anderson are starting a business selling books online. They start with 3000 books. The first week, they offer 100 books for sale online. Each week, they plan to offer 100 more books for sale online.
- A. Write an expression to represent the number of books that Mr. and Mrs. Anderson have NOT offered for sale online at the end of w weeks. Explain why your expression is correct.
 - B. Using your expression from Part A, how many books have NOT been offered for sale online at the end of 9 weeks? Show your work algebraically, and explain how you found your answer.
 - C. The total cost for storing the remaining books for w weeks is given by multiplying the number of books NOT offered for sale online by $\frac{0.02w}{0.8}$. Use your expression from Part A to find a completely simplified expression for the total cost to store the remaining books for w weeks. Show your work algebraically, and explain how you found your answer.

1) Trey needs to prove that the expression $(5 + x)(3) - 2(x - 4)$ is equal to $x + 23$.

A. This table shows some of the steps he uses and the reasons for each step. List the missing steps that go with each algebraic property, and explain why each property you listed is used.

Step	Reason
1. $(5 + x)(3) - 2(x - 4)$	1. Given
2. $3(5 + x) - 2(x - 4)$	2. Commutative property of multiplication
3. $3(x + 5) - 2(x - 4)$	3. Commutative property of addition
4.	4. Distributive property
5.	5. Commutative property of addition
6. $3x - 2x + 23$	6. Addition fact
7.	7. Reverse of the distributive property
8. $1 \cdot x + 23$	8. Subtraction fact
9.	9. Identity property of multiplication

B. Evaluate $(5 + x)(3) - 2(x - 4)$ and $x + 23$ for $x = -30$. Show your work algebraically.

Directions: Once you have answered each question use the rubric to score your response. Then email me this document by 8 am on 1/10/13.

Question	Your Score	Teacher Score
1		
2		
3		

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