

Name: _____

Place your answer in the spaces provided. You must show your work to receive credit.

(8pts) 1. Evaluate the expression using the values provided.

$$2(4a+b) \div (a+2b) \quad \text{for } a=3 \text{ and } b=-2$$

(6 pts) 2. Add. $\frac{2}{3} + \frac{\boxed{}\boxed{}}{\boxed{}\boxed{}} - \frac{4}{5} \frac{\boxed{}\boxed{}}{\boxed{}\boxed{}}$

(8 pts) 3. Evaluate.

$$\frac{(5 \boxed{} 7)^3 + |3 \boxed{} 8|}{6 \boxed{} 4 \cdot 2}$$

(8 pts) 4. Simplify completely.

$$2x \boxed{} 3[5 + 2(3x \boxed{} 4)]$$

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(10 pts) 5. Solve. $\frac{1}{4}(12a - 8) = 2 - (16 - 5a)$

 $a =$

(6 pts) 6. Solve $3x + 4y = 8$ for y .

 $y =$

(10 pts) 7. Simplify completely. Do not leave negative exponents in your answer.

$$\frac{5a^{-6}b^5c^{-2}}{3a^{-3}b^0c^{-4}}$$

(8 pts) 8. Simplify and write scientific notation for the answer.

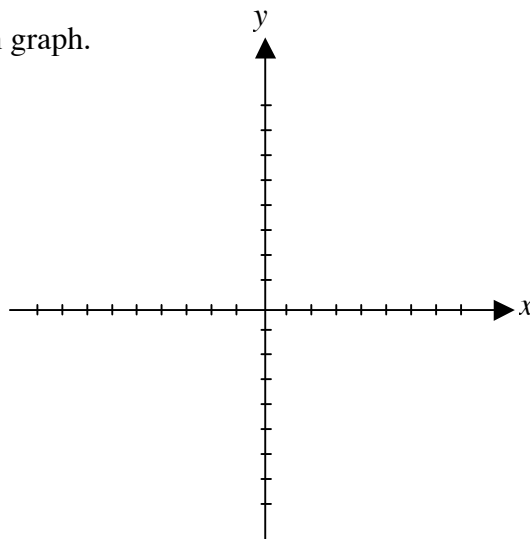
$$(3.1 \times 10^4)(2.7 \times 10^7)$$

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- (10 pts) 9. Make a table of at least three pairs of x and y values for this equation and then graph.
 $y = \frac{1}{2}x + 1$

x	y



- (8 pts) 10. Joanne sells cosmetics from her home. For each order she adds 30% commission to the wholesale price for herself plus a \$2.00 handling fee. If she charges a customer \$28.00 for an order, what was the wholesale price? (Name the variable and **set up an equation**. Do NOT solve.)

wholesale
price =

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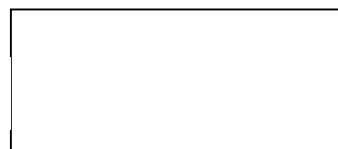
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- (10 pts) 11. The width of a rectangle is $\frac{1}{3}$ of its length and its perimeter is 112 cm. Find the dimensions of the rectangle. (Draw a picture, name the variable, **set up an equation**, and solve.)

width =



length =



- (8 pts) 12. Kevin has \$800 to invest at a bank that pays 4.5% simple interest on certificates of deposit. How many years will it take for Kevin to earn \$72 in interest? (Name the variable, **set up an equation**, and solve.)

