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Circle your answer for problems 1-3. You must show correct work to receive credit.

- (8 pts) 1. Express the following as an algebraic expression and evaluate that expression for the number 45:

Thirty-five percent of a number subtracted from the number.

- A. 29.25
B. -1530
C. 1530
D. -29.25
E. None of the above

- (8 pts) 2. Perform the indicated operations and simplify. **(Do not use a calculator).**

$$\frac{3}{4} + \frac{2}{5} - \frac{7}{10} \div \frac{15}{8}$$

- A. $\frac{6}{5}$
B. $\frac{16}{15}$
C. $\frac{6}{25}$
D. $\frac{27}{32}$
E. None of the above

- (8 pts) 3. Solve $W = 3m - 3r$ for m .

- A. $m = -\frac{W - 3r}{3}$
B. $m = W + r$
C. $m = 3W + 9r$
D. $m = \frac{W + 3r}{3}$
E. $m = 3W - 3r$

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

(10 pts) 4.

(3 pts) (a) Convert 250,000,000,000 to scientific notation.

(3 pts) (b) Convert .00000096 to scientific notation.

(4 pts) (c) Multiply the values from parts (a) and (b). Leave your answer in scientific notation.

(14 pts) 5. Solve the following equations for x.

(6 pts) (a) $\frac{1}{3}x + \frac{3}{4} = 2$

 $x =$

(8 pts) (b) $6x - [2(9x + 4) + 3] = 16$

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

- (10 pts) 6. John has \$2400 to invest for three years. He expects to earn \$612 in simple interest during this time. Use the formula, $I = Prt$, to find the rate of simple interest his money will have to earn. Give your answer as a percentage.

- (14 pts) 7. Simplify. Do not leave negative exponents in your answer.

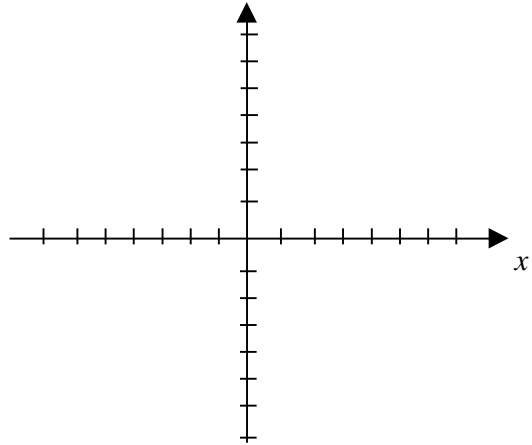
(8 pts) (a) $(3x^{-5}y^3)^2(-4x^2y^{-7})$

(6 pts) (b) $\frac{2x^{-10}y^4}{16x^{-6}y^{-12}}$

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

- (8 pts) 8. Graph $y = |x| - 2$ on the coordinate axes below. You must label at least three points on the graph.



- (8 pts) 9. Max's scores on four tests are 91, 79, 93, and 81. What must the score be on his next test so that the average will be 88? (Name the variable, **set up an equation**, and solve.)

- (12 pts) 10. The first angle of a triangle is five degrees less than twice the second angle. The third angle is eight degrees more than three times the second angle. Find the measure of the **largest** angle. Hint: The angles of a triangle add to 180° . (Draw and label a picture, **set up an equation**, and solve.)

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