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

\[2(4a+b)+(a+2b) \quad \text{for} \quad a=3 \quad \text{and} \quad b=\square 2\]

(6 pts) 2. Add.

\[\frac{2}{3} + \frac{4}{5}\]

(8 pts) 3. Evaluate.

\[\frac{(5 \square 7)^3 + 3 \square 8}{6 \square 4 \cdot 2}\]

(8 pts) 4. Simplify completely.

\[2x \square 3[5 + 2(3x \square 4)]\]
(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.

\[ \frac{5a^3b^5c^2}{3a^3b^0c^{14}} \]

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

\( (3.1 \times 10^{14})(2.7 \times 10^{17}) \)
(10 pts) 9. Make a table of at least three pairs of $x$ and $y$ values for this equation and then graph. 
\[ y = -x - 1 \]

\[ \begin{array}{c|c}
  x & y \\
\end{array} \]

(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.)

\[ \text{wholesale price} = \]
(10 pts) 11. The width of a rectangle is 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.)