Name(s)_____

Write a system of equations in x and y describing the situation. Do not solve the system.

1) One number is 5 more than another number. If you add 8 to 3 times the first number, the result is 4 times the second number.

A) $\begin{cases} x + y = 5 \\ 3x - 4y = -8 \end{cases}$

B) $\begin{cases} x - y = 5 \\ 3x - 4y = 8 \end{cases}$

C) $\begin{cases} x - y = 5 \\ -3x + 4y = -8 \end{cases}$

D) $\begin{cases} x - y = 5 \\ 3x - 4y = -8 \end{cases}$

Solve.

2) One number is four more than a second number. Two times the first number is 8 more than four times the second number.

3) Devon purchased tickets to an air show for 9 adults and 2 children. The total cost was $228. The cost of a child's ticket was $7 less than the cost of an adult's ticket. Find the price of an adult's ticket and a child's ticket.

4) A chemist needs 120 milliliters of a 78% solution but has only 57% and 93% solutions available. Find how many milliliters of each that should be mixed to get the desired solution.

5) Jen Butler has been pricing Speed-Pass train fares for a group trip to New York. Three adults and four children must pay $ 136. Two adults and three children must pay $97.
Find the price of the adult's ticket and the price of a child's ticket.

1) D
2) 0 & 4 not as a point
3) $22 adult, $15 child
4) 50ml @ 57% ; 70ml @ 78%
5) $19 child ; $20 adult