ALL SYSTEMS GO?

1. Solve:

$$\begin{cases} y = 6x \\ 4x + y = 7 \end{cases}$$

2. Solve:

$$\begin{cases} y = 3x \\ x = -2y + 70 \end{cases}$$

3. Which equation, together with $y = -1.5x + 3$, makes a system with one solution?

A. $y = -1.5x + 6$

B. $y = -1.5x$

C. $2y = -3x + 6$

D. $2y + 3x = 6$

E. $y = -2x + 3$

4. The system $x - 6y = 4,\ 3x - 18y = 4$ has no solution.

a. Change one constant or coefficient to make a new system with one solution.

b. Change one constant or coefficient to make a new system with an infinite number of solutions.

5. Here are a lot of systems of equations:

A. $\begin{cases} y = -2x + 6 \\ y = x - 3 \end{cases}$

B. $\begin{cases} y = 5x - 4 \\ y = 4x + 12 \end{cases}$

C. $\begin{cases} y = \frac{2}{3}x - 4 \\ y = -\frac{4}{3}x + 9 \end{cases}$

D. $\begin{cases} 4y + 7x = 6 \\ 4y + 7x = -5 \end{cases}$

E. $\begin{cases} y = 0.24x \\ y = 0.18x + 0.9 \end{cases}$

F. $\begin{cases} y = 4.5x + 15 \\ y = 5x + 12.5 \end{cases}$

G. $\begin{cases} y = 3x \\ x + y = 52 \end{cases}$

Choose 4 systems to solve. At least one should be from your "least difficult" list and one should be from your "most difficult" list.