

Do Now

1) How many solutions does the equation have :
 $3x + 20 = 3(x + 4) + 8$

- a) 0 b) 1 c) 2 d) infinitely many
- ex $6 \neq 2$ ex: $x = 4$
- Systems
 $3x + 4y = 10$
 $2x - 6y = 7$

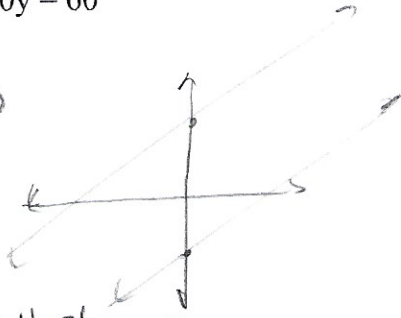
$$\begin{aligned}
 3x + 20 &= 3(x + 4) + 8 \\
 3x + 20 &= 3x + 12 + 8 \\
 3x + 20 &= 3x + 20 \\
 \cancel{-3x} &\quad \quad \quad \cancel{-3x} \\
 \hline
 20 &= 20 \\
 \text{Same } \# &
 \end{aligned}$$

2) A group of students are going on a field trip. Those that have a coupon will pay \$30 and those that don't will pay \$40. The school collected \$1500 for the 60 students. Which systems of linear equations models this situation?

- A) $30x + 40y = 50$
 $x + y = 1500$
- B) $30x + 40y = 1500$
 $x + y = 60$
- C) $30x + y = 60$
 $40x + y = 1500$
- D) $30x + y = 1500$
 $x + 40y = 60$

3) $y = 2x + 10$
 $y = 2x - 6$

Same slope (rate of change)
Different y-int (initial value)



The equations represent a pair of parallel lines.
Because they are parallel they have NO solutions.

