

Types of Systems

Consistent → **One Solution** (x, y)
 Lines intersect at one point.
 Slopes → Different
 b → Same or Different

Inconsistent → **No Solution**
 Lines are Parallel → **Do NOT meet**
 Slopes → Same
 b → Different

Consistent → **Infinitely Many Solutions**
 Lines are Dependent → **Overlap**
 Slopes → Same
 b → Same

Oct 15-10:43 AM

Graphical

$Ax + By = C$
 $4x + 3y = 7$
 $fx + 6y = 14$

$y = \frac{2}{3}x + 5$
 $y = -\frac{2}{3}x + 5$

Elimination
 $(3x - y = 4) \times 3$
 $-9x + 3y = 12$
 $9x - 3y = 12$
 $-9x + 3y = 12$
 $0 = 0$ (Identity)

Substitution
 $3x - y = 4$
 $-9x + 3y = 12$
 $-9x + 3(-4 + 3x) = 12$
 $-9x - 12 + 9x = 12$
 $-9x + 9x = 0$
 $0 = 0$ (Identity)

Graphical

Oct 15-11:07 AM

① $4x + 3y = 10$
 ② $-x + 2y = -1$

① $4x + 3y - 2z = 5$
 ② $x + 2y + z = 9$
 ③ $3x + 2y - z = 6$

$6x + 4y - 2z = 12$
 $\Rightarrow 3x + 5y = 14$
 $5x + 6y - 2z = 21$

Oct 15-12:21 PM

Elimination of I Love Math!!!

$-2x + 4z = 6$
 $4x + 2y = 5$
 $-2x = 1.25$
 $x = -875$

$2(2x + y = 6)$
 $-4x + 2y = 12$
 $4x + 2y = 5$
 $\frac{4y = 17}{4}$
 $y = 4.25$

Oct 15-12:04 PM