Name: Key Show work needed to justify your answer. Date: _____

**HW # 38:** Algebra 1 - Standard 24 - Graphing Systems of Equations 5 points

**Determine the number of solutions the system has. Then state whether the system of equations is *consistent* or *inconsistent* and if it is *independent* or *dependent*.**

**5.** $y = \frac{1}{2}x$
$y = x + 2$

Different slopes

Consistent independent

Intersect at one point

**6.** $4x - 6y = 12$
$-2x + 3y = -6$

$4x - 6y = 12$
$-6y = -4x + 12$
$y = \frac{2}{3}x - 2$

$3y = 2x - 6$
$y = \frac{2}{3}x - 2$

SAME line →

Consistent Dependent

**8.** $2x + 3y = 10$
$4x + 6y = 12$

$3y = -2x + 10$ | $6y = -4x + 12$
$y = -\frac{2}{3}x + \frac{10}{3}$ | $y = -\frac{2}{3}x + 2$

Inconsistent

(Lines are Parallel)

**12.** $y = 4x + 2$
$y = -2x - 4$

Different slopes. intersect at one Point

Consistent independent

**13.** $y = x - 6$
$y = x + 2$

Same slope diff intercepts. Lines are parallel

Inconsistent

**14.** $x + y = 4$
$3x + 3y = 12$

$y = -1x + 4$

$3y = -3x + 12$
$y = -1x + 4$

SAME line. Infinite Solutions

Consistent Dependent