ALGEBRA 1
CHAPTER 6 REVIEW WS

Name KEY

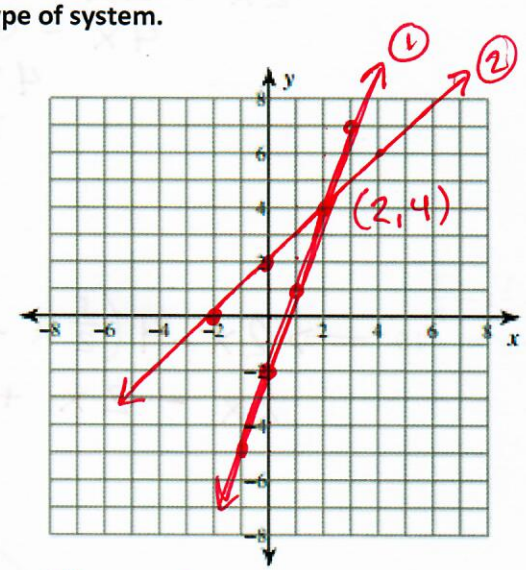
REVIEW WS: SOLVE SYSTEMS OF EQUATIONS USING GRAPHING, SUBSTITUTION, ELIMINATION

Solve by graphing. State the solution and the type of system.

1. ① $y = 3x - 2$ ② $4x - 4y = -8$

m = 3; b = -2

x-int (y=0)	y-int (x=0)
$4x = -8$	$-4y = -8$
$x = -2$	$y = 2$
$(-2, 0)$	$(0, 2)$



SOLN

(2,4)

TYPE

consistent
independent

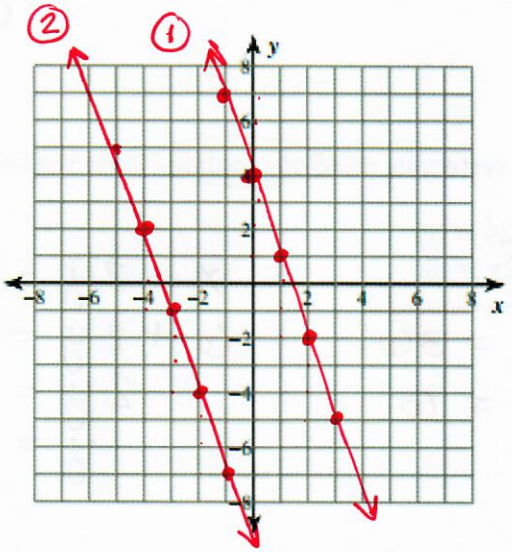
2. ① $y = -3x + 4$ ② $y - 2 = -3(x + 4)$

m = -3; b = 4

$y - (2) = -3(x - (-4))$

point: $(-4, 2)$

slope: $m = -3$



SOLN

no solution

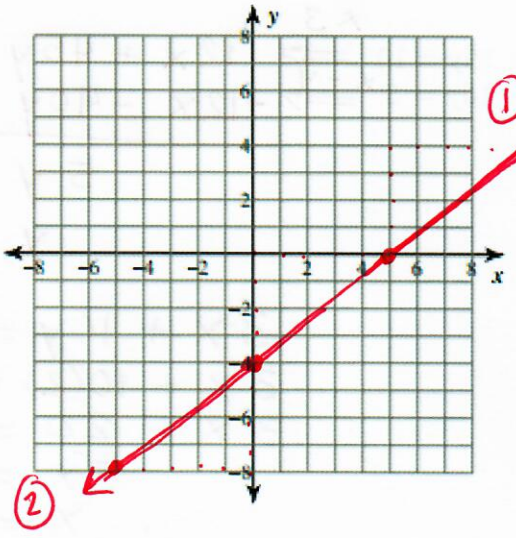
TYPE

inconsistent

3. ① $y = \frac{4}{5}x - 4$ ② $4x - 5y = 20$

$m = \frac{4}{5}$; b = -4

x-int (y=0)	y-int (x=0)
$4x = 20$	$-5y = 20$
$x = 5$	$y = -4$
$(5, 0)$	$(0, -4)$



SOLN

infinite

TYPE

consistent
dependent

Solve each system by using *substitution*. State the solution and the type of system.

4. $\begin{cases} y = x - 3 \\ 2x + 2y = 10 \end{cases}$

$2x + 2(x-3) = 10$
$2x + 2x - 6 = 10$
$4x - 6 = 10$
$4x = 16$
$x = 4$

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

Soln
(4, 1)

Type
consistent
independent

5. $\begin{cases} y = \frac{1}{2}x - \frac{5}{2} \\ 2x - 4y = -10 \end{cases}$

$2x - 4\left(\frac{1}{2}x - \frac{5}{2}\right) = -10$
$2x - 2x + 10 = -10$
$10 = -10$

False
↳ lines must be parallel

Soln
No solution

Type
inconsistent

Solve each system by using *elimination*. State the solution and the type of system.

6. $\begin{cases} 5x - 2y = 36 \\ x + 2y = 0 \end{cases}$

$+$
$6x = 36$
$x = 6$

$x + 2y = 0$
$6 + 2y = 0$
$2y = -6$
$y = -3$

Soln
(6, −3)

Type
consistent
independent

7. $\begin{cases} 4x + 15y = 10 \\ 3x + 10y = 5 \end{cases}$ $\times 3$, $\times -4$

$12x + 45y = 30$
$-12x - 40y = -20$
$5y = 10$
$y = 2$

$3x + 10y = 5$
$3x + 10(2) = 5$
$3x + 20 = 5$
$3x = -15$
$x = -5$

Soln
(−5, 2)

Type
consistent
independent