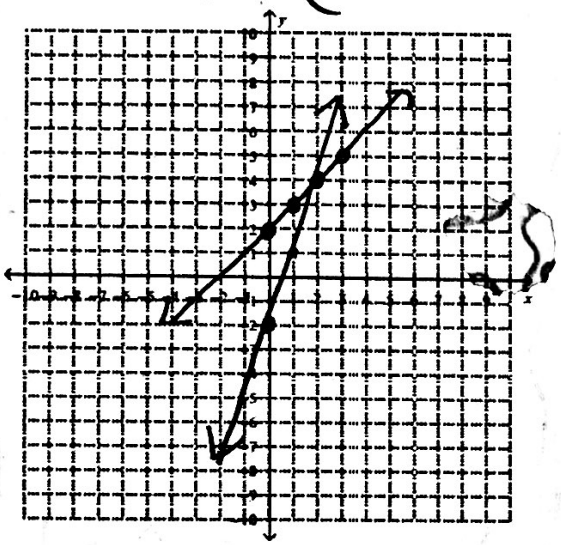
Systems Review

PART 1: SOLVE THE SYSTEM OF EQUATIONS BY GRAPHING.

1. $y = x + 2$
   $y = 3x - 2$

(2,4)



2. $y = 2x + 3$
   $y = 2x + 1$

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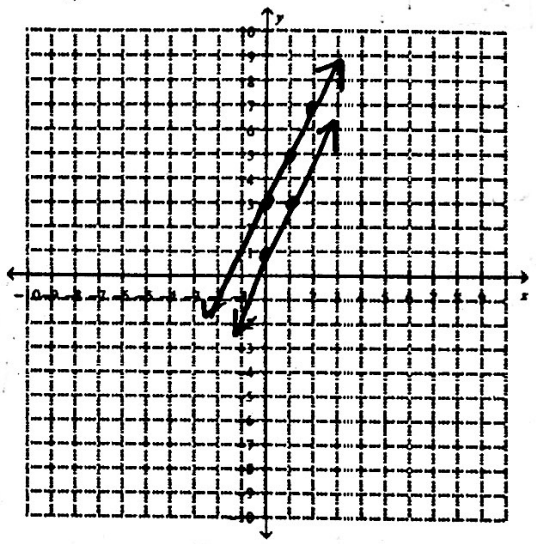
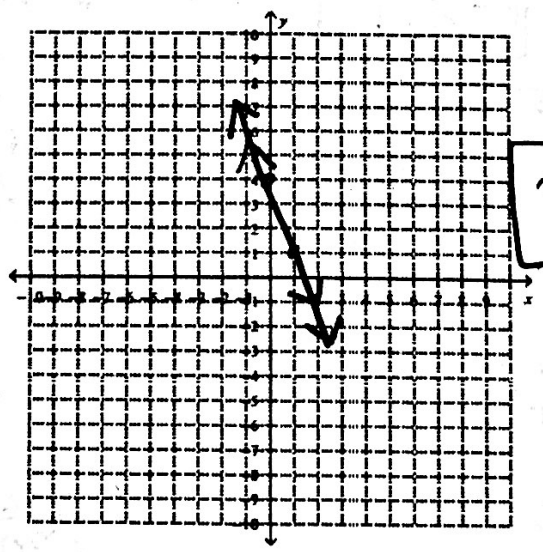


3. $y = -3x + 4$

$y + 3x = 4$
$-3x \quad -3x$

$y = -3x + 4$



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PART 2: SOLVE THE SYSTEM OF EQUATIONS BY USING SUBSTITUTION.

4. $y = -x - 6$, $y = x - 4$

$(-1, -5)$

$-x - 6 = x - 4$

$-x + 6 \quad -x + 6$

$-2x = 2$

$x = -1$

$y = -1 - 4$

$y = -5$

5. $y = 3x + 2$, $x - y = 4$

$(-3, -7)$

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

$x - 3x - 2 = 4$

$-2x - 2 = 4$

$+2 \quad +2$

$-2x = 6$

$x = -3$

$y = 3(-3) + 2$

$-9 + 2$

-7

6. $y = 2x - 10$, $y = 4x - 8$

$(-1, -12)$

$2x - 10 = 4x - 8$

$-2x + 8 \quad -2x + 8$

$-2 = 2x$

$-1 = x$

$y = 2(-1) - 10$

$-2 - 10$

-12

7. $2y = 2x + 12$, $y = -2x - 3$

$(-3, 3)$

$2(-2x - 3) = 2x + 12$

$-4x - 6 = 2x + 12$

$+4x \quad -12 \quad +4x \quad -12$

$-18 = 6x$

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

$6 - 3$

$y = 3$

PART 3: SOLVE THE SYSTEM OF EQUATIONS USING ELIMINATION.

8. $4x + 3y = -5$, $-2x + 2y = 6$

$(-2, 1)$

$2(-2x + 2y = 6)$

$4x + 3y = -5$

$-4x + 4y = 12$

$7y = 7$

$y = 1$

$4x + 3(1) = -5$

$4x + 3 = -5$

$4x = -8$

$x = -2$

9. $5x + 4y = -7$, $5x - 2y = 1$

$(1, -3)$

$3 = x$

$2y = -6$

$y = -3$

$5x + 4(-3) = -7$

$5x - 12 = -7$

$+12 \quad +12$

$5x = 5$

$x = 1$

PART 4: SPECIAL CASES

10. $y = -5x - 2$, $5x + y = 0$

$\emptyset$

$5x + 5x - 2 = 0$

$-2 \neq 0$

11. $2(x - 2y = 5)$, $-2x + 4y = -10$, $2x - 4y = 10$

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$0 = 0$