Name _____ Date _____

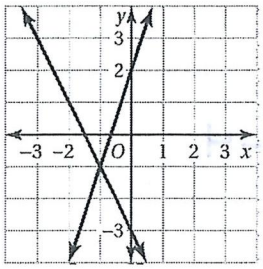
Chapter 5 Pre-Test Test A

Match the system of linear equations with the corresponding graph. Estimate the solution for each Graph.

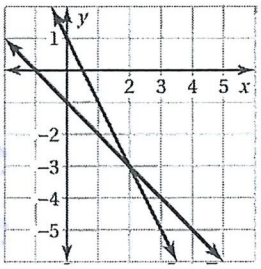
C **1.** $-3x + y = -2$
$y = 4x - 3$

B **2.** $y = -x - 1$
$2x + y = 1$

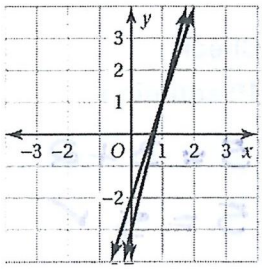
A.



B.



C.

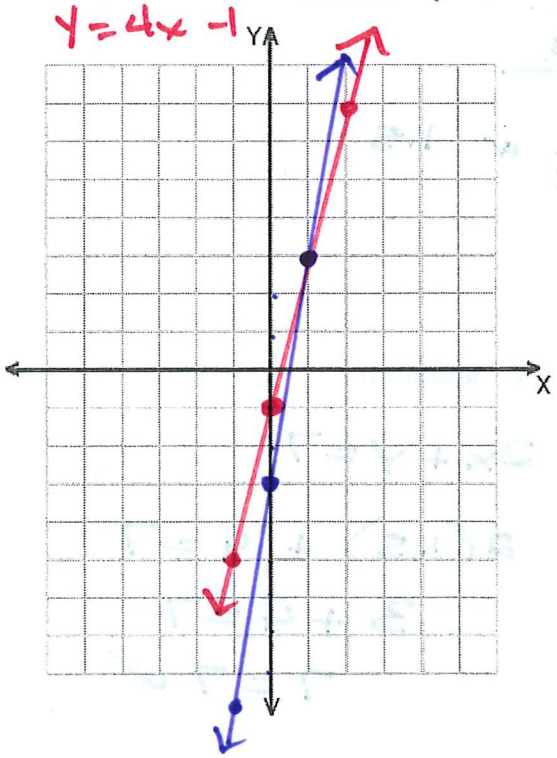


Solution for A. (-1, -1) Solution for B. (2, -3) Solution for C. (1, 1)

3. Solve the system of linear equations by GRAPHING. (3 points for each question.)

$y = 6x - 3$
$-4x + y = -1$ (1, 3)

$y = 4x - 1$



4. Solve using substitution. Check your solution. (4 points)

$y = x + 2$

$y = 3x - 4$

Solution (3,5)

$x+2 = 3x-4$

$-x \quad -x$

$2 = 2x - 4$

$+4 \quad +4$

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

$y = x+2$

$y = 3+2$

$y = 5$

Check

1st equation

$5 = 3+2$

$5 = 5$ ✓

2nd equation

$5 = 3(3) - 4$

$5 = 9-4$

$5 = 5$ ✓

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5. Solve using elimination. Check your solution. (4 points)

$-2x + 3y = 9$

$2x + y = 7$

Solution (1.5, 4)

$4y = 16$

$\frac{4y}{4} = \frac{16}{4}$

$y = 4$

$2x+y=7$

$2x+4=7$

$-4 \quad -4$

$2x = 3$

$x = \frac{3}{2}$ or 1.5

Check

1st equation

$-2x+3y=9$

$-2(1.5)+3(4)=9$

$-3+12=9$

$9=9$ ✓

2nd equation

$2x+y=7$

$2(1.5)+4=7$

$3+4=7$

$7=7$ ✓

6. Solve using elimination **Check your solution. (4 points)**

$-6x + 5y = 25$

Solution _____

$-3(-2x - 4y = 14)$

$-6x + 5y = 25$

$6x + 12y = -42$

$17y = -17$

$\frac{17y}{17} = \frac{-17}{17}$

$y = -1$

$-6x + 5(-1) = 25$

$-6x - 5 = 25$

$+5 \quad +5$

$-6x = 30$

$\frac{-6x}{-6} = \frac{30}{-6}$

$x = -5$

Check

1st equation

$-6(-5) + 5(-1) = 25$

$30 - 5 = 25$

$25 = 25$ ✓

2nd equation

$-2(-5) - 4(-1) = 14$

$10 + 4 = 14$

$14 = 14$ ✓

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7. A class of 366 students went on a field trip. They took 12 vehicles, some vans and some busses. Find the number of vans and the number of busses they took if each van holds 6 students and each bus holds 55 students.

Write the system of equations. Solve using Any strategy.

Solution 6 busses & 6 vans

$v + b = 12$

$6v + 55b = 366$

$-6(v + b = 12)$

$-6v - 6b = -72$

$+ \; 6v + 55b = 366$

$\frac{49b}{49} = \frac{294}{49}$

$b = 6$ so $v = 6$