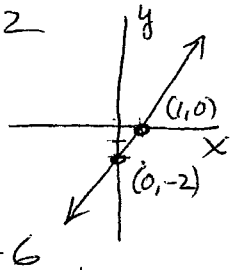
Exam 4c* Solutions

1. $y = 2x - 2$

y int $= -2$

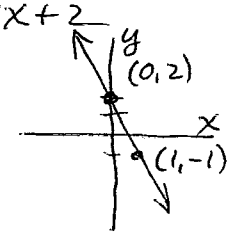
$m = \frac{2}{1}$



2. $y = -3x + 2$

y int $= 2$

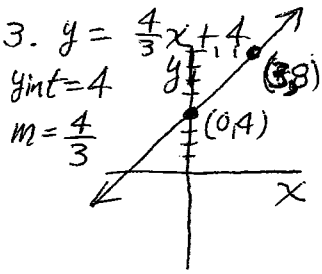
$m = \frac{-3}{1}$



3. $y = \frac{4}{3}x + 4$

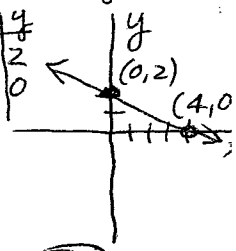
y int $= 4$

$m = \frac{4}{3}$



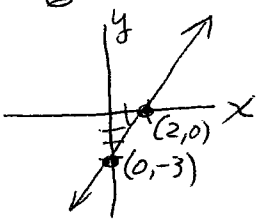
4. $x + 2y = 4$

x	y
0	2
4	0



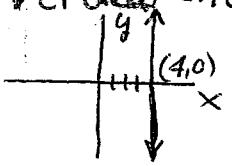
5. $3x - 2y = 6$

x	y
0	-3
2	0



6. $x = 4$

Vertical Line



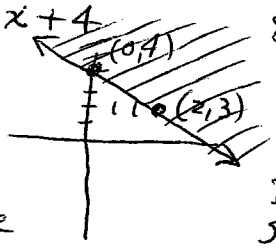
7. $y \geq -\frac{2}{3}x + 4$

y int $= 4$

$m = -\frac{2}{3}$

Solid Line

Shade above

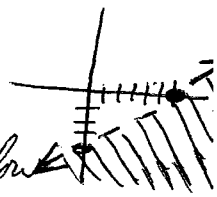


8. $2x - 3y > 12$

x	y
0	-4
6	0

Dotted

Shade below



9. $y = -\frac{3}{4}x + 6$

$m = -\frac{3}{4}$

y int $= 6$

10. $y = 3x + 0$

$m = \frac{3}{1}$ or 3

y int $= 0$

11. $y = -x - 2$

$m = -\frac{1}{1}$ or -1

y int $= -2$

12. $3x + 4y = -8$

$4y = -3x - 8$

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

$m = -\frac{3}{4}$ $y = -2$

13. $x + y = -8$

$y = -x - 8$

$m = -1$ $y = -8$

14. $m = 0$

15. $3x - 2y = 12$

x int ($y = 0$) $3x = 12$

$x = 4$

y int ($x = 0$) $-2y = 12$

$y = -6$

16. $y = 4x - 8$

y int $= -8$

x int ($y = 0$)

$0 = 4x - 8$

$8 = 4x$

$x = 2$

17. (4,2) (6,11)

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$= \frac{11 - 2}{6 - 4}$

$= \frac{9}{2}$

18. (4,-2) (2,8)

$m = \frac{8 - (-2)}{2 - 4}$

$= \frac{10}{-2} = -5$

19. (-2,-5) (-4,3)

$m = \frac{3 - (-5)}{-4 - (-2)}$

$= \frac{8}{-2} = -4$

20. (2,0) (2,4)

$m = \frac{4 - 0}{2 - 2}$

$= \frac{4}{0}$ = Undefined

21. $x + y = 74$

$x + y = 42$

$2x = 116$

$x = 58$

$58 + y = 74$

$-58 \quad -58$

$y = 16$

Ch: $x - y = 42$

$58 - 16 = 42$ ✓

22. $2x + 3y = 12$

$-1(2x - y = 4)$

$2x + 3y = 12$

$-2x + y = -4$

$4y = 8$

$y = 2$

$2x + 3y = 12$

$2x + 3(2) = 12$

$2x + 6 = 12$

$2x = 6$

$x = 3$

Ch: $2x - y = 4$

$2(3) - 2 = 4$

$6 - 2 = 4$ ✓

23. $3(3x + 2y = 10)$

$2(4x - 3y = -15)$

$9x + 6y = 30$

$8x - 6y = -30$

$17x = 0$

$x = 0$

$3(0) + 2y = 10$

$y = 5$

24. $-3(x + 2y = 6)$

$3x + 6y = 12$

$-3x - 6y = -18$

$3x + 6y = 12$

$0 = -6$

No Solution

Parallel Lines

25. $5x + 2y = 14$

$y = 2x - 11$

$5x + 2(2x - 11) = 14$

$5x + 4x - 22 = 14$

$9x - 22 = 14$

$+22 \quad +22$

$9x = 36$

$x = 4$

$y = 2x - 11$

$y = 2(4) - 11$

$y = 8 - 11$

$y = -3$

Ch: $5x + 2y = 14$

$5(4) + 2(-3) = 14$

$20 - 6 = 14$ ✓

26. $5y - 4x = 22$

$x = -4y + 5$

$5y - 4(-4y + 5) = 22$

$5y + 16y - 20 = 22$

$21y = 42$

$y = 2$

$x = -4y + 5$

$x = -4(2) + 5$

$= -8 + 5$

$x = -3$

Ch: $5y - 4x = 22$

$5(2) - 4(-3) = 22$ ✓