

Honors Algebra 1 Notes...

4.4 Review Domain and Range for the 3 Methods of Graphing

Version #2 (more practice)

Name: _____

Date: _____

Period: _____

Graph using the TABLE METHOD. Then state the Range.

- | | | |
|-----|-------------|----------------------------|
| 31) | $y=x+1$; | Domain: $x > -2$ |
| 32) | $y=x-1$; | Domain: $x \leq 2$ |
| 33) | $y=-2x+3$; | Domain: $1 \leq x \leq 3$ |
| 34) | $y=2x-3$; | Domain: $-1 \leq x \leq 4$ |

Graph using ANY METHOD. Then state the Range.

- | | | |
|-----|-----------|----------------------------|
| 37) | $y=3$; | Domain: $-5 \leq x \leq 5$ |
| 38) | $y=-2$; | Domain: $x \geq 2$ |
| 39) | $y+4=0$; | Domain: $x < 5$ |

Graph using INTERCEPT METHOD. Then state the Range.

- | | | |
|-----|-------------------|----------------------|
| 43) | $-3x + 6y = -6$; | Domain: $-2 < x < 4$ |
| 44) | $4x - 12y = 24$; | Domain: $x \leq 3$ |
| 53) | $6x - 3y = -18$; | Domain: $x > -3$ |
| 54) | $5x + 4y = 20$; | Domain: $x < 4$ |

Graph using SLOPE-INTERCEPT METHOD(identify y-intercept and 2 more points). Then state the Range.

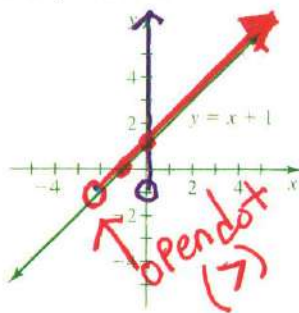
- | | | |
|-----|----------------|-------------------------|
| 49) | $y = 2 - x$; | Domain: $x > 3$ |
| 50) | $Y = -2/3X$; | Domain: $-6 < x < 6$ |
| 51) | $3x + y = 5$; | Domain: $x \leq 3$ |
| 52) | $x + 2y = 4$; | Domain: $-6 \leq x < 4$ |

4-4 MORE PRACTICE "GRAPHING LINEAR FUNCTIONS WITH DOMAIN RESTRICTIONS"

NOTE: THE GRAPH IS IN RED

GRAPHING USING TABLES:

31. $y = x + 1$



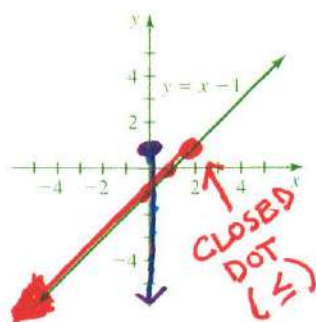
$D: x > -2$

x	y
-2	-1
-1	0
0	1

increasing

$R: y > -1$

32. $y = x - 1$



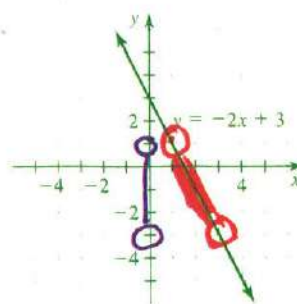
$D: x \leq 2$

x	y
2	1
1	0
0	-1

decreasing

$R: y \leq 1$

33. $y = -2x + 3$



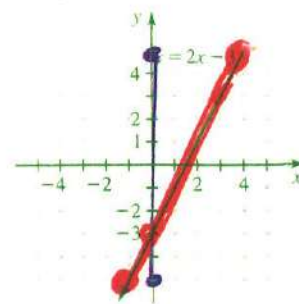
$D: 1 < x < 3$

x	y
1	1
2	-1
3	-3

between

$R: -3 < y < 1$

34. $y = 2x - 3$



$D: -1 \leq x \leq 4$

x	y
-1	-5
0	-3
4	5

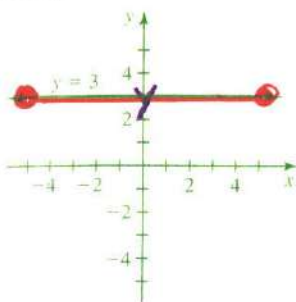
between

$R: -5 \leq y \leq 5$

GRAPH HORIZONTAL AND VERTICAL LINES

TIP: CREATING A TABLE MAKES IT EASY TO FIND THE RANGE

37. $y = 3$

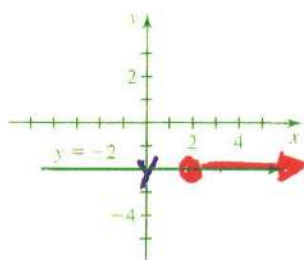


$D: -5 \leq x \leq 5$

x	y
-5	3
0	3
5	3

$R: y = 3$

38. $y = -2$

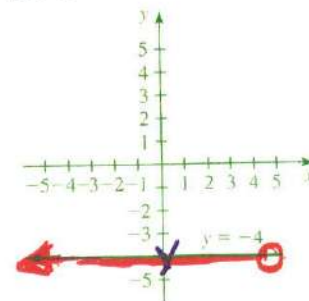


$D: x \geq 2$

x	y
2	-2
3	-2
4	-2

$R: y = -2$

39. $y + 4 = 0$



$D: x < 5$

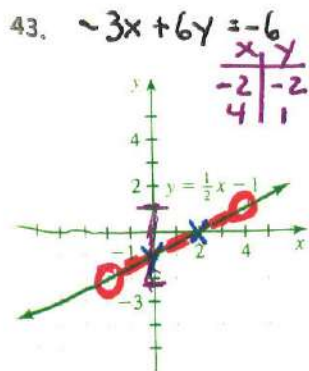
x	y
5	-4
4	-4
3	-4

$R: y = -4$

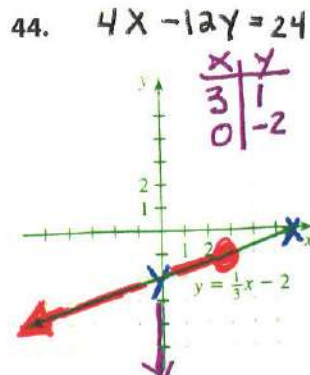
$y + 4 = 0$
 $\frac{y + 4 = 0}{-4 \quad -4}$
 $y = -4$

GRAPH WITH INTERCEPTS

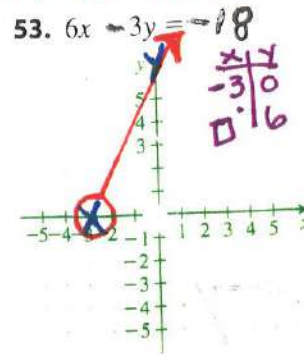
TIP: TO FIND THE RANGE CREATE A TABLE WITH DOMAIN POINTS



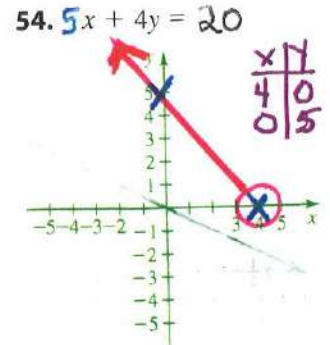
D: $-2 < x < 4$
 X: 2 (2,0)
 Y: -1 (0,-1)
 R: $-2 < y < 4$



D: $x \leq 3$
 X: 6 (6,0)
 Y: -2 (0,-2)
 R: $y \leq 1$



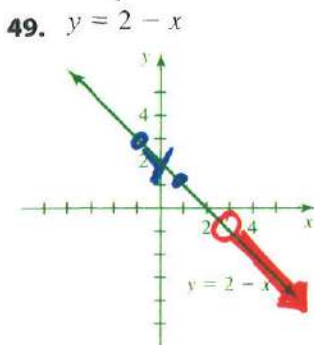
D: $x > -3$
 X: -3 (-3,0)
 Y: 6 (0,6)
 R: $y > 0$



D: $x < 4$
 X: 4 (4,0)
 Y: 5 (0,5)
 R: $y > 0$

GRAPH WITH SLOPE - INTERCEPTS

PUT IN S/I ($y = mx + b$)



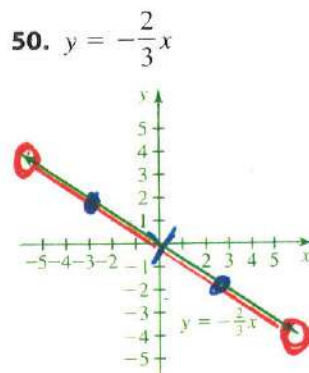
D: $x > 3$

$m = -1$
 $b = 2$

x	y
3	-1
4	-2

↓ smaller

R: $y < -1$

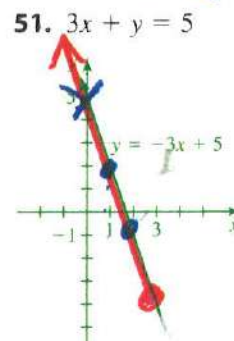


D: $-6 < x < 6$

$m = -2/3$
 $b = 0$

x	y
-6	4
6	-4

R: $-4 < y < 4$



D: $x \leq 3$

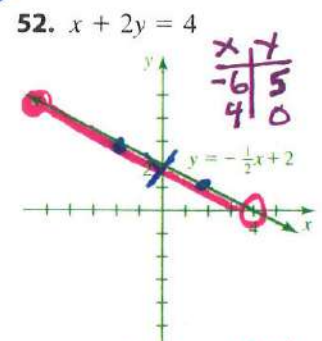
$y = -3x + 5$

$m = -3/1$
 $b = 5$

x	y
3	-4
2	-1

↓ larger

R: $y \geq -4$



D: $-6 \leq x < 4$

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

$y = -\frac{1}{2}x + 2$

$m = -1/2$
 $b = 2$

R: $0 < y \leq 5$