

### 8.3 Vertical and Horizontal Lines

$$2x + 0y = 12 \quad 0x + 3y = 6$$

$$2x = 12 \quad 3y = 6$$

$$x = 6 \quad y = 2$$

slope of horizontal and vertical lines

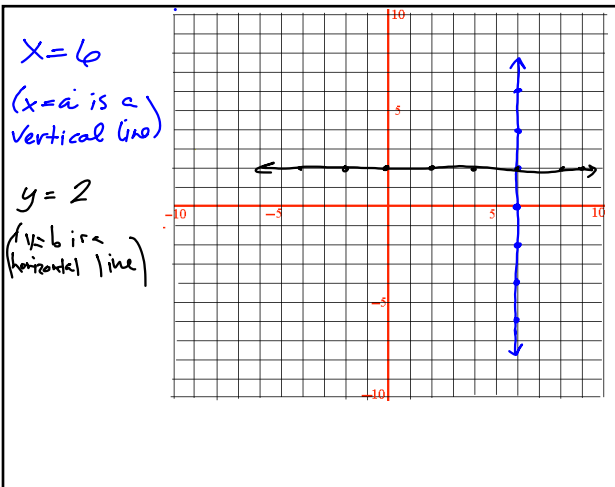
Charts for

$$x = 6$$

x	y
6	-2
6	0
6	2

$$y = 2$$

x	y
-2	2
0	2
2	2



Slopes

$x = 6$   
Use two points  
 $(6, -2)$   $(6, 2)$

$$m = \frac{2 - (-2)}{6 - 6}$$

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

for vertical lines  
slope is undefined  
or we say no slope

Slopes

$y = 2$   
 $(-2, 2)$   $(2, 2)$

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

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

For horizontal  
lines slope is  
always 0

Writing Equations

Given two points  
- what coordinate is the same  
 $(6, 4)$   $(-5, 4)$   $(2, -3)$   $(2, 127)$

$y = 4$   $x = 2$   
Given slope and point  
No slope through  $(5, -2)$   $m = 0$  through  $(7, 1)$

$x = 5$

$y = 1$