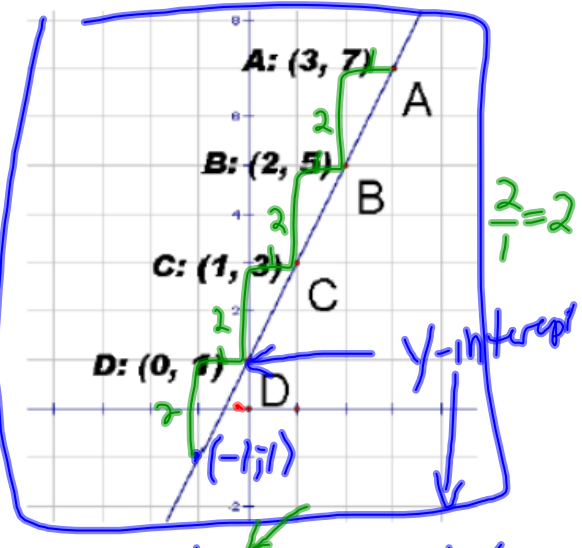


Sample #1

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

| X  | Y  |
|----|----|
| 3  | 7  |
| 2  | 5  |
| 1  | 3  |
| 0  | 1  |
| -1 | -1 |



the rule in words: multiply X by 2 then add 1 ✓

the rule in symbols:  $y = 2x + 1$  ✓

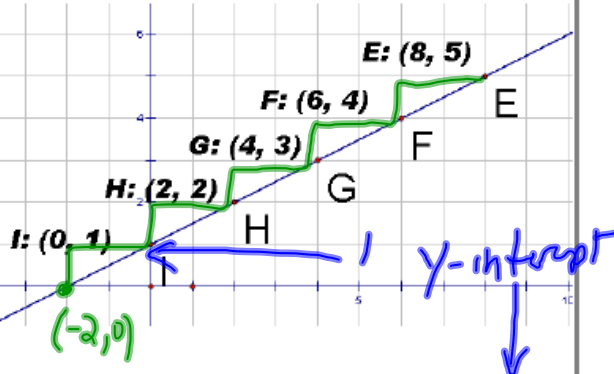
Sample #2

| X  | Y |
|----|---|
| 8  | 5 |
| 6  | 4 |
| 4  | 3 |
| 2  | 2 |
| 0  | 1 |
| -2 | 0 |

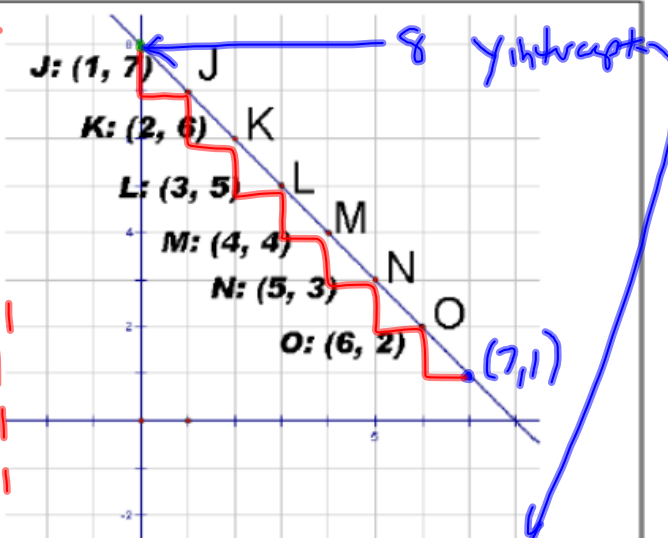
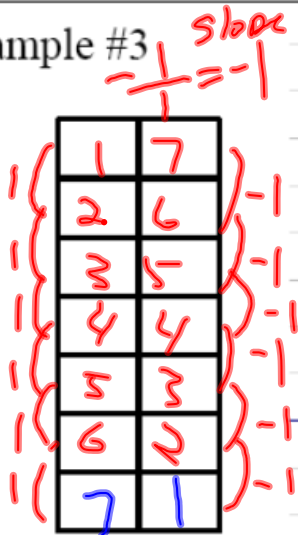
slope  
 $\frac{1}{2} = \frac{1}{2}$

the rule in words: multiply by  $\frac{1}{2}$  then add 1

the rule in symbols:  $y = \frac{1}{2}x + 1$



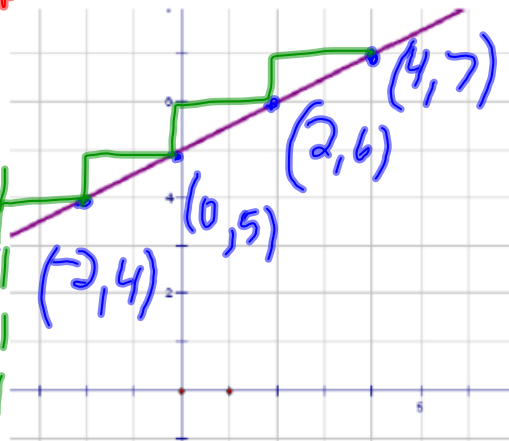
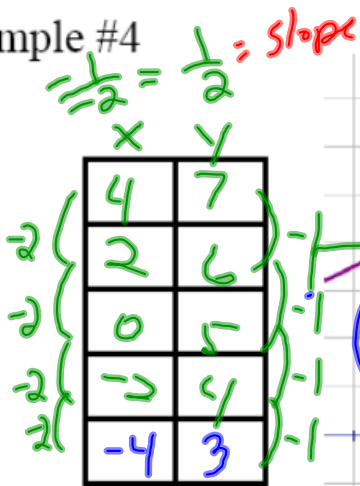
Sample #3



the rule in words: multiply by -1 then add 8

the rule in symbols:  $y = -1x + 8$

Sample #4



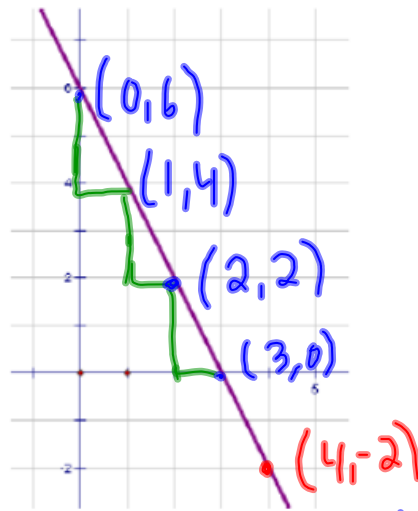
the rule in words: multiply by  $\frac{1}{2}$  then add 5

the rule in symbols:  $y = \frac{1}{2}x + 5$

Sample #5

$$\text{slope} = \frac{-2}{1} = -2$$

|   |    |
|---|----|
| 0 | 6  |
| 1 | 4  |
| 2 | 2  |
| 3 | 0  |
| 4 | -2 |



the rule in words: multiply by -2 then add 6

the rule in symbols:  $y = -2x + 6$

Key values are

Slope = a measure of steepness

y-intercept = where the line crosses

Every equation of a line fits this <sup>the y-axis</sup>

$$Y = (\text{slope})X + (\text{y-intercept})$$