## Algebra II Lesson #2 Unit 2 Notes #2 Class Worksheet #2

For Worksheets #2 & #4

- 1. The horizontal line through (-3, 4).
- 2. The vertical line through (-3, 4).

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- 2. The vertical line through (-3, 4).

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- 1. The horizontal line through (-3, 4). y = k
- 2. The vertical line through (-3, 4).

- 1. The horizontal line through (-3, 4). y = k
- 2. The vertical line through (-3, 4).

- 1. The horizontal line through (-3, 4). y = 4y = k
- 2. The vertical line through (-3, 4).

- 1. The horizontal line through (-3, 4). y = 4y = k
- 2. The vertical line through (-3, 4).

1. The horizontal line through (-3, 4). y = 4

 $\mathbf{y} = \mathbf{k}$ 

2. The vertical line through (-3, 4).

1. The horizontal line through (-3, 4). y = 4

$$\mathbf{y} = \mathbf{k}$$

**2.** The vertical line through (-3, 4).

1. The horizontal line through (-3, 4). y = 4

$$\mathbf{y} = \mathbf{k}$$

2. The vertical line through (-3, 4).

 $\mathbf{x} = \mathbf{k}$ 

1. The horizontal line through (-3, 4). y = 4

y = k  
2. The vertical line through (-3, 4).  
$$x = k$$

1. The horizontal line through 
$$(-3, 4)$$
.  $y = 4$ 

 $\mathbf{v} = \mathbf{k}$ 

2. The vertical line through (-3, 4). 
$$x = -3$$
  
 $x = k$ 

- 1. The horizontal line through (-3, 4). y = 4y = k
- 2. The vertical line through (-3, 4). x = -3

 $\mathbf{x} = \mathbf{k}$ 

3. The line with slope 0 through (5, -4).

4. The line with "no slope" through (5, -4).

3. The line with slope 0 through (5, -4).

4. The line with "no slope" through (5, -4).

**3.** The line with slope 0 through (5, -4).

4. The line with "no slope" through (5, -4).

- 3. The line with slope 0 through (5, -4). horizontal line
- 4. The line with "no slope" through (5, -4).

- 3. The line with slope 0 through (5, -4). horizontal line  $\rightarrow y = k$
- 4. The line with "no slope" through (5, -4).

- 3. The line with slope 0 through (5, -4). horizontal line  $\rightarrow y = k$
- 4. The line with "no slope" through (5, -4).

- 3. The line with slope 0 through (5, -4). y = -4horizontal line  $\rightarrow y = k$
- 4. The line with "no slope" through (5, -4).

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- 4. The line with **"no slope"** through (5, -4).

- 3. The line with slope 0 through (5, -4). y = -4horizontal line  $\rightarrow y = k$
- 4. The line with "no slope" through (5, -4). \_ vertical line

- 3. The line with slope 0 through (5, -4). y = -4horizontal line  $\rightarrow y = k$

3. The line with slope 0 through (5, -4). y = -4horizontal line  $\rightarrow y = k$ 

4. The line with "no slope" through (5, -4). vertical line  $\rightarrow x = k$ 

3. The line with slope 0 through (5, -4). y = -4horizontal line  $\rightarrow y = k$ 

4. The line with "no slope" through (5, -4). x = 5vertical line  $\rightarrow x = k$ 

- 3. The line with slope 0 through (5, -4). y = -4horizontal line  $\rightarrow y = k$
- 4. The line with "no slope" through (5, -4). x = 5vertical line  $\rightarrow x = k$

5. The line with slope -4 and y-intercept 5.

5. The line with slope -4 and y-intercept 5.

5. The line with slope -4 and y-intercept 5.

5. The line with slope -4 and y-intercept 5. oblique line

5. The line with slope -4 and y-intercept 5.
oblique line → y = mx + b

- 5. The line with slope -4 and y-intercept 5. oblique line  $\rightarrow y = mx + b$ m = -4
- 6. The line with slope 3/4 through (0, -1).

- 5. The line with slope -4 and y-intercept 5. oblique line  $\rightarrow y = mx + b$ m = -4
- 6. The line with slope 3/4 through (0, -1).
- 5. The line with slope -4 and y-intercept 5. oblique line  $\rightarrow y = mx + b$ m = -4 b = 5
- 6. The line with slope 3/4 through (0, -1).

- 5. The line with slope -4 and y-intercept 5. y =oblique line  $\rightarrow y = mx + b$ m = -4 b = 5
- 6. The line with slope 3/4 through (0, -1).

- 5. The line with slope -4 and y-intercept 5. y = -4xoblique line  $\rightarrow y = mx + b$ m = -4 b = 5
- 6. The line with slope 3/4 through (0, -1).

- 5. The line with slope -4 and y-intercept 5. y = -4x + 5oblique line  $\rightarrow y = mx + b$ m = -4 b = 5
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- 5. The line with slope -4 and y-intercept 5. y = -4x + 5oblique line  $\rightarrow y = mx + b$ m = -4 b = 5
- 6. The line with slope 3/4 through (0, -1). oblique line

5. The line with slope -4 and y-intercept 5. y = -4x + 5oblique line  $\rightarrow y = mx + b$ m = -4 b = 5

6. The line with slope 3/4 through (0, -1). oblique line  $\rightarrow$  y = mx + b















5. The line with slope -4 and y-intercept 5. y = -4x + 5oblique line  $\rightarrow y = mx + b$ m = -4 b = 5

6. The line with slope 3/4 through (0, -1).  $y = \frac{3}{4}x - 1$ oblique line  $\rightarrow y = mx + b$ m = 3/4 b = -1

7. The line through (-5, 4) and (0, 2).

The line is not vertical.

7. The line through (-5, 4) and (0, 2).

The line is not horizontal.

7. The line through (-5, 4) and (0, 2).

oblique line

7. The line through (-5, 4) and (0, 2).

oblique line  $\rightarrow$  y = mx + b

oblique line 
$$\rightarrow$$
 y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1}$$

7. The line through (-5, 4) and (0, 2).  $x_1$   $y_1$   $x_2$   $y_2$   $y_2$ oblique line  $\rightarrow y = mx + b$  y = w

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1}$$

7. The line through (-5, 4) and (0, 2).  $x_1$   $y_1$   $x_2$   $y_2$   $y_2$ oblique line  $\rightarrow y = mx + b$ 

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} =$$

7. The line through (-5, 4) and (0, 2).  $x_1$   $y_1$   $x_2$   $y_2$   $y_2$ oblique line  $\rightarrow y = mx + b$ 

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{2}{2}$$

7. The line through (-5, 4) and (0, 2).  $x_1$   $y_1$   $y_2$   $y_2$  y

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{2 - 4}{2}$$

7. The line through (-5, 4) and (0, 2).  $x_1$   $y_1$   $y_2$   $y_2$  y

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{2 - 4}{0 - 1}$$

7. The line through (-5, 4) and (0, 2).  $x_1$   $y_1$   $y_2$   $y_2$  y

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{2 - 4}{0 - -5}$$

oblique line 
$$\rightarrow$$
 y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{2 - 4}{0 - 5}$$
$$\mathbf{m} = -\frac{2}{5}$$

7. The line through (-5, 4) and (0, 2).

oblique line 
$$\rightarrow$$
 y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{2 - 4}{0 - 5}$$
$$\mathbf{m} = -2/5$$

The y-intercept is the value of y when x = 0.
7. The line through (-5, 4) and (0, 2).

oblique line 
$$\rightarrow$$
 y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{2 - 4}{0 - 5}$$
$$\mathbf{m} = -\frac{2}{5}$$

7. The line through (-5, 4) and (0, 2).

oblique line 
$$\rightarrow$$
 y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{2 - 4}{0 - 5}$$
$$\mathbf{m} = -\frac{2}{5} \qquad \mathbf{h} = 2$$

7. The line through (-5, 4) and (0, 2). y =

oblique line 
$$\rightarrow$$
 y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{2 - 4}{0 - 5}$$
$$\mathbf{m} = -\frac{2}{5}$$
$$\mathbf{h} = 2$$

7. The line through (-5, 4) and (0, 2).  $y = \frac{-2}{5}x$ 

oblique line 
$$\rightarrow$$
 y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{2 - 4}{0 - 5}$$
$$\mathbf{m} = -\frac{2}{5}$$
$$\mathbf{h} = 2$$

7. The line through (-5, 4) and (0, 2).  $y = \frac{-2}{5}x + 2$ 

oblique line  $\rightarrow$  y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{2 - 4}{0 - 5}$$
$$\mathbf{m} = -\frac{2}{5}$$
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7. The line through (-5, 4) and (0, 2).  $y = \frac{-2}{5}x + 2$ 

oblique line 
$$\rightarrow$$
 y = mx + b

m = 
$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - 4}{0 - 5}$$
  
m =  $-\frac{2}{5}$  b = 2

8. The line with slope -3/4 through (-8, 1).

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8. The line with slope -3/4 through (-8, 1). oblique line

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oblique line  $\rightarrow$  y = mx + b m = -3/4

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b **m = -3/4 b = ?** 

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b **m = -3/4 b = ?** 

We are not given the y-intercept.

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b m = -3/4 b = ?

8. The line with slope -3/4 through (-8, 1).
oblique line → y = mx + b m = -3/4 b = ?
We are not given the y-intercept.
We will use the point-slope equation.

$$\mathbf{y} - \mathbf{y}_1 = \mathbf{m}(\mathbf{x} - \mathbf{x}_1)$$

8. The line with slope -3/4 through (-8, 1).
oblique line → y = mx + b m = -3/4 b = ?
We are not given the y-intercept.
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oblique line  $\rightarrow$  y = mx + b **m = -3/4 b = ?** 

$$\mathbf{y} - \mathbf{y}_1 = \mathbf{m}(\mathbf{x} - \mathbf{x}_1)$$

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b **m = -3/4 b = ?** 

$$y - y_1 = m(x - x_1)$$
$$y - 1$$

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b **m = -3/4 b = ?** 

$$y - y_1 = m(x - x_1)$$
  
 $y - 1 =$ 

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b m = -3/4 b = ?

$$y - y_1 = m(x - x_1)$$
  
 $y - 1 = \frac{-3}{4}($ 

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b m = -3/4 b = ?

$$y - y_1 = m(x - x_1)$$
  
 $y - 1 = \frac{-3}{4}(x - x_1)$ 

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b m = -3/4 b = ?

$$y - y_1 = m(x - x_1)$$
  
 $y - 1 = \frac{-3}{4}(x - -8)$ 

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b **m = -3/4 b = ?** 

$$y - y_1 = m(x - x_1)$$
  

$$y - 1 = \frac{-3}{4}(x - -8)$$
  

$$y - 1 = \frac{-3}{4}(x + 8)$$

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b m = -3/4 b = ?

$$y - y_1 = m(x - x_1)$$
  
 $y - 1 = \frac{-3}{4}(x - -8)$   
 $y - 1 = \frac{-3}{4}(x + 8)$   
 $y - 1 = -3$ 

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b m = -3/4 b = ?

$$y - y_1 = m(x - x_1)$$
  

$$y - 1 = \frac{-3}{4}(x - -8)$$
  

$$y - 1 = \frac{-3}{4}(x + 8)$$
  

$$y - 1 = \frac{-3}{4}x$$

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b m = -3/4 b = ?

$$y - y_1 = m(x - x_1)$$
  

$$y - 1 = \frac{-3}{4}(x - -8)$$
  

$$y - 1 = \frac{-3}{4}(x + 8)$$
  

$$y - 1 = \frac{-3}{4}x - 6$$

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b m = -3/4 b = ?

$$y - y_{1} = m(x - x_{1})$$
  

$$y - 1 = \frac{-3}{4}(x - -8)$$
  

$$y - 1 = \frac{-3}{4}(x + 8)$$
  

$$y - 1 = \frac{-3}{4}x - 6$$

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b m = -3/4 b = ?

$$y - y_{1} = m(x - x_{1})$$
  

$$y - 1 = \frac{-3}{4}(x - -8)$$
  

$$y - 1 = \frac{-3}{4}(x + 8)$$
  

$$y - 1 = \frac{-3}{4}x - 6$$
  

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

8. The line with slope -3/4 through (-8, 1).

oblique line  $\rightarrow$  y = mx + b m = -3/4 b = ?

$$y - y_{1} = m(x - x_{1})$$
  

$$y - 1 = \frac{-3}{4}(x - -8)$$
  

$$y - 1 = \frac{-3}{4}(x + 8)$$
  

$$y - 1 = \frac{-3}{4}x - 6$$
  

$$y = \frac{-3}{4}x - 5$$

Algebra II Class Worksheet #2 Unit 2 Write the equation of each line described. If the line is oblique, use slope-intercept form. 8. The line with slope -3/4 through  $\begin{pmatrix} x_1 & y_1 \\ -8, 1 \end{pmatrix}$ .  $y = \frac{-3}{4}x - 5$ oblique line  $\rightarrow y = mx + b$  m = -3/4 b = ?We are not given the y-intercept. We will use the point-slope equation.  $y = y_1 = m(x - x_1)$ 

$$y - y_1 - m(x - x_1)$$
  

$$y - 1 = \frac{-3}{4}(x - -8)$$
  

$$y - 1 = \frac{-3}{4}(x + 8)$$
  

$$y - 1 = \frac{-3}{4}x - 6$$
  

$$y = \frac{-3}{4}x - 5$$

8. The line with slope -3/4 through (-8, 1).  $y = \frac{-3}{4}x - 5$ oblique line  $\rightarrow y = mx + b$  m = -3/4 b = ? We are not given the y-intercept. We will use the point-slope equation.

$$y - y_{1} = m(x - x_{1})$$
  

$$y - 1 = \frac{-3}{4}(x - -8)$$
  

$$y - 1 = \frac{-3}{4}(x + 8)$$
  

$$y - 1 = \frac{-3}{4}x - 6$$
  

$$y = \frac{-3}{4}x - 5$$

9. The line with slope 2/3 through (4, -3).

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9. The line with slope 2/3 through (4, -3).

oblique line  $\rightarrow$  y = mx + b

9. The line with slope 2/3 through (4, -3).

oblique line  $\rightarrow$  y = mx + b m = 2/3

9. The line with slope 2/3 through (4, -3).

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

9. The line with slope 2/3 through (4, -3).

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

9. The line with slope 2/3 through (4, -3).

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

 $\mathbf{y} - \mathbf{y}_1 = \mathbf{m}(\mathbf{x} - \mathbf{x}_1)$ 

9. The line with slope  $\frac{y_1}{4, -3}$ .

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

 $\mathbf{y} - \mathbf{y}_1 = \mathbf{m}(\mathbf{x} - \mathbf{x}_1)$ 

9. The line with slope  $\frac{y_1}{4, -3}$ .

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

 $\mathbf{y} - \mathbf{y}_1 = \mathbf{m}(\mathbf{x} - \mathbf{x}_1)$ 

**y** – **-3** =

9. The line with slope  $\frac{y_1}{4, -3}$ .

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

 $\mathbf{y} - \mathbf{y}_1 = \mathbf{m}(\mathbf{x} - \mathbf{x}_1)$ 

$$\mathbf{y} - \mathbf{-3} = \frac{2}{3}$$

9. The line with slope  $\frac{y_1}{4, -3}$ .

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

 $\mathbf{y} - \mathbf{y}_1 = \mathbf{m}(\mathbf{x} - \mathbf{x}_1)$ 

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

9. The line with slope  $\frac{y_1}{4, -3}$ .

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

 $y - y_1 = m(x - x_1)$  $y - -3 = \frac{2}{3}(x - 4)$ y + 3 =

9. The line with slope  $\frac{y_1}{4, -3}$ .

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

 $y - y_1 = m(x - x_1)$  $y - -3 = \frac{2}{3}(x - 4)$  $y + 3 = \frac{2}{3}x$ 

9. The line with slope  $\frac{y_1}{4, -3}$ .

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

 $y - y_1 = m(x - x_1)$  $y - 3 = \frac{2}{3}(x - 4)$  $y + 3 = \frac{2}{3}x - \frac{8}{3}$ 

9. The line with slope  $\frac{y_1}{4, -3}$ .

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

 $y - y_1 = m(x - x_1)$   $y - -3 = \frac{2}{3}(x - 4)$   $y + 3 = \frac{2}{3}x - \frac{8}{3}$  $y = x = x + \frac{2}{3}x - \frac{8}{3}$ 

9. The line with slope  $\frac{2}{3}$  through (4, -3).

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

 $y - y_1 = m(x - x_1)$   $y - -3 = \frac{2}{3}(x - 4)$   $y + 3 = \frac{2}{3}x - \frac{8}{3}$  $y = \frac{2}{3}x$ 

9. The line with slope  $\frac{2}{3}$  through (4, -3).

oblique line  $\rightarrow$  y = mx + b m = 2/3 b = ?

**Use the point-slope equation.** 

 $y - y_1 = m(x - x_1)$  $y - -3 = \frac{2}{3}(x - 4)$  $y + 3 = \frac{2}{3}x - \frac{8}{3}$  $y = \frac{2}{3}x - \frac{17}{3}$ 

9. The line with slope 2/3 through (4, -3). y = y = 0oblique line  $\rightarrow y = mx + b$  m = 2/3 b = ?

$$\mathbf{y} = \frac{2}{3}\mathbf{x} - \frac{17}{3}$$

**Use the point-slope equation.** 

 $y - y_1 = m(x - x_1)$  $y - -3 = \frac{2}{3}(x - 4)$  $y + 3 = \frac{2}{3}x - \frac{8}{3}$  $y = \frac{2}{3}x - \frac{17}{3}$ 

9. The line with slope 2/3 through (4, -3).  $y = \frac{2}{3}x - \frac{17}{3}$ oblique line  $\rightarrow y = mx + b$  m = 2/3 b = ?

Use the point-slope equation.

 $y - y_1 = m(x - x_1)$   $y - -3 = \frac{2}{3}(x - 4)$   $y + 3 = \frac{2}{3}x - \frac{8}{3}$  $y = \frac{2}{3}x - \frac{17}{3}$ 

10. The line through (2, -3) and (2, 0).

**10.** The line through (2, -3) and (2, 0).

10. The line through (2, -3) and (2, 0).

10. The line through (2, -3) and (2, 0).
t
t
t
vertical line

10. The line through 
$$(2, -3)$$
 and  $(2, 0)$ .  $x = 2$   
vertical line  $\rightarrow x = k$ 

10. The line through 
$$(2, -3)$$
 and  $(2, 0)$ .  $x = 2$   
vertical line  $\rightarrow x = k$ 

11. The line through (2, 0) and (-4, -3).

The line is not vertical.

11. The line through (2, 0) and (-4, -3).

The line is not horizontal.

11. The line through (2, 0) and (-4, -3).

oblique line

11. The line through (2, 0) and (-4, -3).

oblique line  $\rightarrow$  y = mx + b

11. The line through (2, 0) and (-4, -3).

oblique line  $\rightarrow$  y = mx + b

 $\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1}$ 

11. The line through (2, 0) and (-4, -3).  $x_1$   $y_1$   $y_2$   $y_2$   $y_2$   $y_2$   $y_2$   $y_1$   $y_2$   $y_2$   $y_2$   $y_2$   $y_2$   $y_1$   $y_2$   $y_2$ 

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} =$$
$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-3}{-3}$$

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-3 - 0}{-3 - 0}$$

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-3 - 0}{-4}$$

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-3 - 0}{-4 - 2}$$

11. The line through (2, 0) and (-4, -3).

oblique line  $\rightarrow$  y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-3 - 0}{-4 - 2} \qquad \mathbf{m} = 1/2$$

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11. The line through (2, 0) and (-4, -3).

oblique line  $\rightarrow$  y = mx + b  $\mathbf{m} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{-4 - 2} \qquad \mathbf{m} = 1/2 \qquad \mathbf{b} = ?$ 

**Use the point-slope equation.** 

 $\mathbf{y} - \mathbf{y}_1 = \mathbf{m}(\mathbf{x} - \mathbf{x}_1)$ 

11. The line through (2, 0) and (-4, -3).  $x_1 \qquad y_1$ oblique line  $\rightarrow y = mx + b$  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{-4 - 2}$  m = 1/2 b = ?

**Use the point-slope equation.** 

 $\mathbf{y} - \mathbf{y}_1 = \mathbf{m}(\mathbf{x} - \mathbf{x}_1)$ 

11. The line through (2, 0) and (-4, -3).  $x_1 \qquad y_1$ oblique line  $\rightarrow y = mx + b$  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{-4 - 2}$  m = 1/2 b = ?

$$y - y_1 = m(x - x_1)$$
$$y - 0 =$$

11. The line through (2, 0) and (-4, -3).  $x_1 \qquad y_1$ oblique line  $\rightarrow y = mx + b$  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{-4 - 2}$  m = 1/2 b = ?

**Use the point-slope equation.** 

 $y - y_1 = m(x - x_1)$  $y - 0 = \frac{1}{2}($ 

11. The line through (2, 0) and (-4, -3).  $x_1 \qquad y_1$ oblique line  $\rightarrow y = mx + b$  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{-4 - 2}$  m = 1/2 b = ?

$$y - y_1 = m(x - x_1)$$
  
 $y - 0 = \frac{1}{2}(x - 2)$ 

11. The line through (2, 0) and (-4, -3).  $x_1 \qquad y_1$ oblique line  $\rightarrow y = mx + b$  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{-4 - 2}$  m = 1/2 b = ?

$$y - y_1 = m(x - x_1)$$
  
 $y - 0 = \frac{1}{2}(x - 2)$   
 $y =$ 

11. The line through (2, 0) and (-4, -3).  $x_1 \qquad y_1$ oblique line  $\rightarrow y = mx + b$  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{-4 - 2}$  m = 1/2 b = ?

$$y - y_1 = m(x - x_1)$$
$$y - 0 = \frac{1}{2}(x - 2)$$
$$y = \frac{1}{2}x$$

11. The line through (2, 0) and (-4, -3).  $x_1 \qquad y_1$ oblique line  $\rightarrow y = mx + b$  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{-4 - 2}$  m = 1/2 b = ?

**Use the point-slope equation.** 

 $y - y_1 = m(x - x_1)$  $y - 0 = \frac{1}{2}(x - 2)$  $y = \frac{1}{2}x - 1$ 

11. The line through (2, 0) and (-4, -3).  $y = \frac{1}{2}x - 1$ 

**oblique line** y = mx + b $\mathbf{m} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{-4 - 2}$   $\mathbf{m} = 1/2$   $\mathbf{b} = ?$ 

**Use the point-slope equation.** 

 $y - y_1 = m(x - x_1)$  $y - 0 = \frac{1}{2}(x - 2)$  $y = \frac{1}{2}x - 1$ 

11. The line through (2, 0) and (-4, -3).  $y = \frac{1}{2}x - 1$ 

oblique line 
$$\longrightarrow y = mx + b$$
  

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{-4 - 2} \qquad m = 1/2 \qquad b = ?$$

$$y - y_1 = m(x - x_1)$$
  
 $y - 0 = \frac{1}{2}(x - 2)$   
 $y = \frac{1}{2}x - 1$ 

12. The line through (-2, 1) and (3, -1).

The line is not vertical.

12. The line through (-2, 1) and (3, -1).

The line is not horizontal.

12. The line through (-2, 1) and (3, -1).

oblique line

12. The line through (-2, 1) and (3, -1).

oblique line  $\rightarrow$  y = mx + b

12. The line through (-2, 1) and (3, -1).

oblique line  $\rightarrow$  y = mx + b

 $\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1}$ 

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} =$$

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1}{-1}$$

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{-1}$$

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3}$$

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$$

12. The line through (-2, 1) and (3, -1).

oblique line  $\rightarrow$  y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2} \qquad \mathbf{m} = -2/5$$

12. The line through (-2, 1) and (3, -1).

oblique line  $\rightarrow$  y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$$
  $\mathbf{m} = -2/5$   $\mathbf{b} = ?$ 

12. The line through (-2, 1) and (3, -1).

oblique line  $\rightarrow$  y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$$
  $\mathbf{m} = -2/5$   $\mathbf{b} = ?$
12. The line through (-2, 1) and (3, -1).

oblique line  $\rightarrow$  y = mx + b  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1 - 1}{3 - 2}$  m = -2/5 b = ?

Use the point-slope equation.  $y - y_1 = m(x - x_1)$ 

12. The line through (-2, 1) and (3, -1). oblique line  $\rightarrow$  y = mx + b  $\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$   $\mathbf{m} = -2/5$   $\mathbf{b} = ?$ 

**Use the point-slope equation.**  $y - y_1 = m(x - x_1)$ 

12. The line through (-2, 1) and (3, -1). oblique line  $\rightarrow$  y = mx + b  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1 - 1}{3 - 2}$  m = -2/5 b = ?

Use the point-slope equation.  $y - y_1 = m(x - x_1)$ 

12. The line through (-2, 1) and (3, -1).  $x_1 \qquad y_1$ oblique line  $\rightarrow y = mx + b$  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1 - 1}{3 - -2}$  m = -2/5 b = ?

$$y - y_1 = m(x - x_1)$$

12. The line through (-2, 1) and (3, -1).  $x_1$   $y_1$   $y_1$   $y_1$   $y_1$   $y_2 - y_1$   $y_2 - y_1$   $y_1 - 1 - 1$  $y_2 - 2/5$ 

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$$
  $\mathbf{m} = -2/5$   $\mathbf{b} =$ 

**Use the point-slope equation.** 

$$y - y_1 = m(x - x_1)$$
  
 $y - 1 = \frac{-2}{2}(x - 2)$ 

5

12. The line through (-2, 1) and (3, -1).  $x_1 \qquad y_1$ oblique line  $\rightarrow y = mx + b$  $m = \frac{y_2 - y_1}{y_1 - \frac{-1 - 1}{y_2}}$   $m = -\frac{2}{5}$  b

$$\mathbf{n} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$$
  $\mathbf{m} = -2/5$   $\mathbf{b} =$ 

**Use the point-slope equation.** 

 $y - y_1 = m(x - x_1)$  $y - 1 = \frac{-2}{5}(x + 2)$ 

12. The line through (-2, 1) and (3, -1).  $x_1$   $y_1$ oblique line  $\rightarrow y = mx + b$  $y_2 - y_1$   $y_1 = 1$ 

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$$
  $\mathbf{m} = -2/5$   $\mathbf{b} =$ 

**Use the point-slope equation.** 

$$y - y_1 = m(x - x_1)$$
  
 $y - 1 = \frac{-2}{5}(x + 2)$   
 $y - 1 = -2$ 

J

12. The line through (-2, 1) and (3, -1).  $x_1$   $y_1$ oblique line  $\rightarrow y = mx + b$  $y_2 - y_1$   $y_1 = 1$ 

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$$
  $\mathbf{m} = -2/5$   $\mathbf{b} =$ 

**Use the point-slope equation.** 

$$y - y_1 = m(x - x_1)$$
  
 $y - 1 = \frac{-2}{5}(x + 2)$   
 $y - 1 = \frac{-2}{5}x$ 

12. The line through (-2, 1) and (3, -1).  $x_1$   $y_1$   $y_1$   $y_1$   $y_1$   $y_1$  $y_2 - y_1$   $y_1 - 1 - 1$   $y_2 - y_1$   $y_1 - y_1$   $y_2 - y_1$   $y_2 - y_1$   $y_1 - y_1$   $y_2 - y_1$   $y_2 - y_1$   $y_1 - y_1$   $y_2 - y_1$   $y_2 - y_1$   $y_1 - y_1$   $y_2 - y_1$   $y_2 - y_1$   $y_1 - y_1$   $y_1 - y_1$   $y_1 - y_1$   $y_2 - y_1$   $y_1 - y_1$   $y_1$   $y_1 - y_1$   $y_1$   $y_1$ 

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$$
  $\mathbf{m} = -2/5$   $\mathbf{b} =$ 

**Use the point-slope equation.** 

$$y - y_1 = m(x - x_1)$$
  
 $y - 1 = \frac{-2}{5}(x + 2)$   
 $y - 1 = \frac{-2}{5}x - \frac{4}{5}$ 

12. The line through (-2, 1) and (3, -1).  $x_1$   $y_1$ oblique line  $\rightarrow y = mx + b$  $y_2 - y_1$  -1 - 1

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$$
  $\mathbf{m} = -2/5$   $\mathbf{b} =$ 

**Use the point-slope equation.** 

$$y - y_1 = m(x - x_1)$$
  
 $y - 1 = \frac{-2}{5}(x + 2)$   
 $y - 1 = \frac{-2}{5}x - \frac{4}{5}$ 

 $\mathbf{v} =$ 

9

12. The line through (-2, 1) and (3, -1).  $x_1$   $y_1$ oblique line  $\rightarrow y = mx + b$  $y_2 - y_1$  -1 - 1

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$$
  $\mathbf{m} = -2/5$   $\mathbf{b} =$ 

**Use the point-slope equation.** 

$$y - y_1 = m(x - x_1)$$
  
 $y - 1 = \frac{-2}{5}(x + 2)$   
 $y - 1 = \frac{-2}{5}x - \frac{4}{5}$   
 $y = \frac{-2}{5}x$ 

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?

12. The line through (-2, 1) and (3, -1).  $x_1$   $y_1$   $y_1$   $y_1$   $y_1$   $y_1$   $y_1$   $y_2 - y_1$   $y_1 - 1 - 1$  $y_2 - y_1$   $y_1 - 1 - 1$ 

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1 - 1}{3 - 2}$$
  $m = -2/5$   $b =$ 

**Use the point-slope equation.** 

$$y - y_1 = m(x - x_1)$$
  

$$y - 1 = \frac{-2}{5}(x + 2)$$
  

$$y - 1 = \frac{-2}{5}x - \frac{4}{5}$$
  

$$y = \frac{-2}{5}x + \frac{1}{5}$$

9

12. The line through (-2, 1) and (3, -1). <u>Y</u>

$$\mathbf{y} = \frac{-2}{5}\mathbf{x} + \frac{1}{5}$$

oblique line  $\rightarrow$  y = mx + b

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-1 - 1}{3 - 2}$$
  $\mathbf{m} = -2/5$   $\mathbf{b} =$ 

**Use the point-slope equation.** 

$$y - y_{1} = m(x - x_{1})$$
$$y - 1 = \frac{-2}{5}(x + 2)$$
$$y - 1 = \frac{-2}{5}x - \frac{4}{5}$$
$$y - \frac{-2}{5}x + \frac{1}{5}$$

 $y = 5^{-1} \cdot 5$ 

12. The line through (-2, 1) and (3, -1).  $y = \frac{-2}{5}x + \frac{1}{5}$ 

oblique line 
$$\longrightarrow y = mx + b$$
  
 $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1 - 1}{3 - 2} \quad m = -2/5 \quad b = ?$ 

Use the point-slope equation.

$$y - y_1 = m(x - x_1)$$
  

$$y - 1 = \frac{-2}{5}(x + 2)$$
  

$$y - 1 = \frac{-2}{5}x - \frac{4}{5}$$
  

$$y = \frac{-2}{5}x + \frac{1}{5}$$









**13.** Line a:



**13.** Line a:

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1}$$



**13.** Line a:



**13.** Line a:

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{-6 - 2}{-2}$$



**13.** Line a:

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{6 - 2}{4}$$



**13.** Line a:

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{6 - 2}{4 - 4}$$



**13.** Line a:

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{6 - 2}{4 - 4}$$
  $\mathbf{m} = 1/2$ 



**13.** Line a:

oblique line  $\rightarrow$  y = mx + b through (-4, 2) and (4, 6)

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{6 - 2}{4 - 4}$$
  $\mathbf{m} = 1/2$ 

 $\mathbf{y} - \mathbf{y}_1 = \mathbf{m}(\mathbf{x} - \mathbf{x}_1)$ 



13. Line a: \_\_\_\_\_\_ oblique line  $\rightarrow y = mx + b$ 

through (-4, 2) and (4, 6)

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{6 - 2}{4 - 4} \qquad \mathbf{m} = 1/2$$

$$\mathbf{y} - \mathbf{y}_1 = \mathbf{m}(\mathbf{x} - \mathbf{x}_1)$$

$$y - 2 =$$



$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{6-2}{4-4}$$
  $\mathbf{m} = 1/2$ 

$$y - y_1 = m(x - x_1)$$
  
 $y - 2 = \frac{1}{2}($ 



13. Line a: oblique line  $\rightarrow y = mx + b$ through (-4, 2) and (4, 6)  $\mathbf{m} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 2}{4 - .4}$   $\mathbf{m} = 1/2$   $y - y_1 = \mathbf{m}(x - x_1)$  $y - 2 = \frac{1}{2}(x - .4)$ 

13. Line a: oblique line  $\rightarrow y = mx + b$ through (-4, 2) and (4, 6)  $\mathbf{m} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6-2}{4--4} \quad \mathbf{m} = 1/2$   $y - y_1 = \mathbf{m}(x - x_1)$   $y - 2 = \frac{1}{2}(x + 4)$ 

X

a **13.** Line a: oblique line  $\rightarrow$  y = mx + b through (-4, 2) and (4, 6) m =  $\frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 2}{4 - 4}$  m = 1/2 X 0 5 -5  $y - y_1 = m(x - x_1)$ -5  $y-2=\frac{1}{2}(x+4)$ y - 2 =

a **13.** Line a: oblique line  $\rightarrow$  y = mx + b through (-4, 2) and (4, 6) m =  $\frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 2}{4 - 4}$  m = 1/2 X 0 5 -5  $y - y_1 = m(x - x_1)$ -5  $y-2=\frac{1}{2}(x+4)$  $y - 2 = \frac{1}{2}x$ 

a **13.** Line a: oblique line  $\rightarrow$  y = mx + b through (-4, 2) and (4, 6) m =  $\frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 2}{4 - 4}$  m = 1/2 X 0 5 -5  $y - y_1 = m(x - x_1)$ -5  $y-2=\frac{1}{2}(x+4)$  $y-2 = \frac{1}{2}x + 2$ 

a **13.** Line a: oblique line  $\rightarrow$  y = mx + b through (-4, 2) and (4, 6) m =  $\frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 2}{4 - 4}$  m = 1/2 X 0 5 -5  $y - y_1 = m(x - x_1)$ -5  $y-2=\frac{1}{2}(x+4)$  $y-2 = \frac{1}{2}x + 2$  $\mathbf{v} =$ 

a **13.** Line a: oblique line  $\rightarrow$  y = mx + b through (-4, 2) and (4, 6)  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 2}{4 - 4}$  m = 1/2X 0 5 -5  $y - y_1 = m(x - x_1)$ -5  $y-2=\frac{1}{2}(x+4)$  $y-2 = \frac{1}{2}x + 2$  $y = \frac{1}{2}x$ 

a **13.** Line a: oblique line  $\rightarrow$  y = mx + b 5 through (-4, 2) and (4, 6) m =  $\frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 2}{4 - 4}$  m = 1/2 X 0 5 -5  $y - y_1 = m(x - x_1)$ -5  $y-2=\frac{1}{2}(x+4)$  $y-2 = \frac{1}{2}x + 2$  $y = \frac{1}{2}x + 4$
13. Line a: 
$$y = \frac{1}{2}x + 4$$
  
oblique line  $\rightarrow y = mx + b$   
through (-4, 2) and (4, 6)  

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6-2}{4-4} \quad m = 1/2$$

$$y - y_1 = m(x - x_1)$$

$$y - 2 = \frac{1}{2}(x + 4)$$

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

$$y = \frac{1}{2}x + 4$$

13. Line a: 
$$y = \frac{1}{2}x + 4$$
  
oblique line  $\rightarrow y = mx + b$   
through (-4, 2) and (4, 6)  
 $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 2}{4 - -4}$   $m = 1/2$   
 $y - y_1 = m(x - x_1)$   
 $y - 2 = \frac{1}{2}(x + 4)$   
 $y - 2 = \frac{1}{2}x + 2$   
 $y = \frac{1}{2}x + 4$ 

14. Line b: \_\_\_\_\_

















14. Line b: y = 6horizontal line through (-7, 6) and (4, 6)  $\uparrow$   $\uparrow$   $\uparrow$  $y = k \rightarrow y = 6$ 

15. Line c: \_\_\_\_\_









15. Line c: \_\_\_\_\_





15. Line c: \_\_\_\_\_

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{6}{2}$$



15. Line c: \_\_\_\_\_

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{\mathbf{6} - \mathbf{0}}{\mathbf{0}}$$



15. Line c: \_\_\_\_\_

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{6 - 0}{-7}$$



15. Line c: \_\_\_\_\_

$$\mathbf{m} = \frac{\mathbf{y}_2 - \mathbf{y}_1}{\mathbf{x}_2 - \mathbf{x}_1} = \frac{6 - 0}{-7 - 2}$$



















15. Line c: 
$$y = \frac{-2}{3}x + \frac{4}{3}$$
  
oblique line  $\rightarrow y = mx + b$   
through (2, 0) and (-7, 6)  
 $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 0}{-7 - 2}$   $m = -2/3$   
 $y - y_1 = m(x - x_1)$   
 $y - 0 = \frac{-2}{3}(x - 2)$   
 $y = \frac{-2}{3}x + \frac{4}{3}$ 

15. Line c: 
$$y = \frac{-2}{3}x + \frac{4}{3}$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 0}{-7 - 2} \quad m = -2/3$$
$$y - y_1 = m(x - x_1)$$
$$y - 0 = \frac{-2}{3}(x - 2)$$
$$y = \frac{-2}{3}x + \frac{4}{3}$$



15. Line c: 
$$y = \frac{-2}{3}x + \frac{4}{3}$$
  
oblique line  $\rightarrow y = mx + b$   
through (2, 0) and (7, 6)  
**Good luck on your homework !!**  
 $m = \frac{x_2 - x_1}{x_2 - x_1} = \frac{-7 - 2}{x_1 - 7 - 2}$   
 $y - y_1 = m(x - x_1)$   
 $y - 0 = \frac{-2}{3}(x - 2)$   
 $y = \frac{-2}{3}x + \frac{4}{3}$