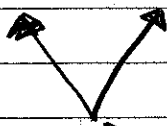


Jan 25<sup>th</sup>

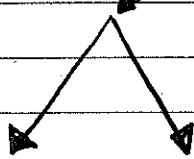
# 6-7 Graphing Absolute Value Equations

$$y = |x|$$



vertex

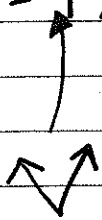
$$y = -|x|$$



the parent functions vertex is on the origin

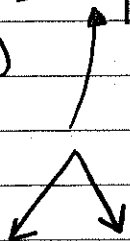
## Vertical Translation

$$y = |x| + 10$$



vertex  
(0, 10)

$$y = -|x| - 3$$



vertex  
(0, -3)

# Horizontal Translation

$$y = |x - 8| \quad \text{or} \quad y = |x + 8|$$

this is a positive 8  
which means  
the graph  
translates to  
the RIGHT.

vertex  
is  $(8, 0)$

$$y = |x - (-8)|$$

this is a negative 8  
which means  
the graph  
translates to  
the LEFT

vertex is  
 $(-8, 0)$

$$y = -|x - 3|$$

$(3, 0)$   
vertex

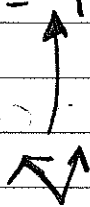
$$y = -|x + 5|$$

$$y = -|x - (-5)|$$

vertex

$(-5, 0)$

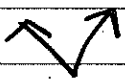
$$y = |x - 3| + 2$$



vertex  
(3, 2)

$$y = |x + 5| + 7$$

$$y = |x - (-5)| + 7$$



vertex  
(-5, 7)

1.2  
2015

10

3

$$① y = |x|$$

$$② y = |x| + 10$$

$$③ y = -|x| - 3$$

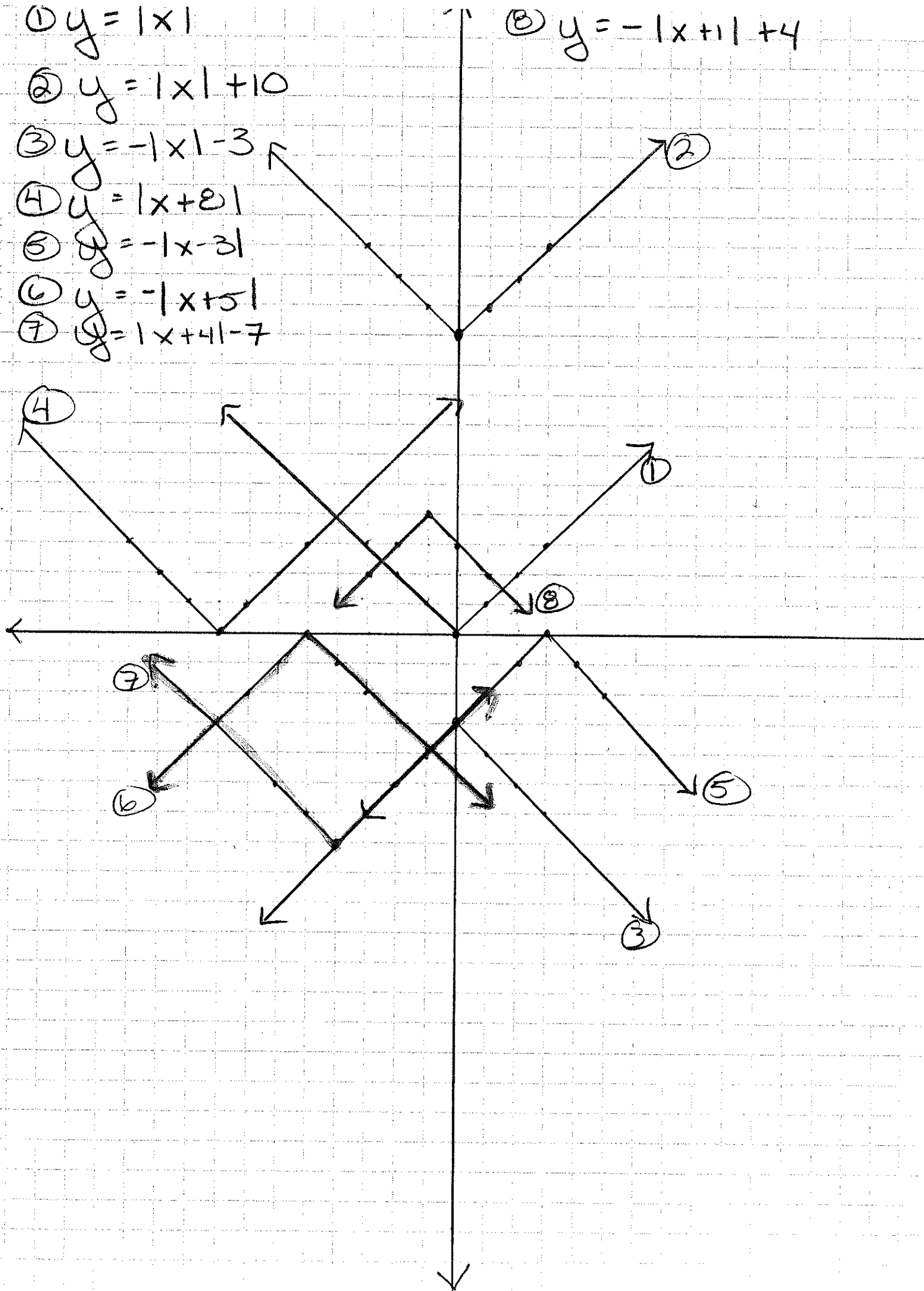
$$④ y = |x + 2|$$

$$⑤ y = -|x - 3|$$

$$⑥ y = -|x + 5|$$

$$⑦ y = |x + 4| - 7$$

$$⑧ y = -|x + 1| + 4$$



①  $y = |x|$

②  $y = |x| + 10$

③  $y = -|x| - 3$

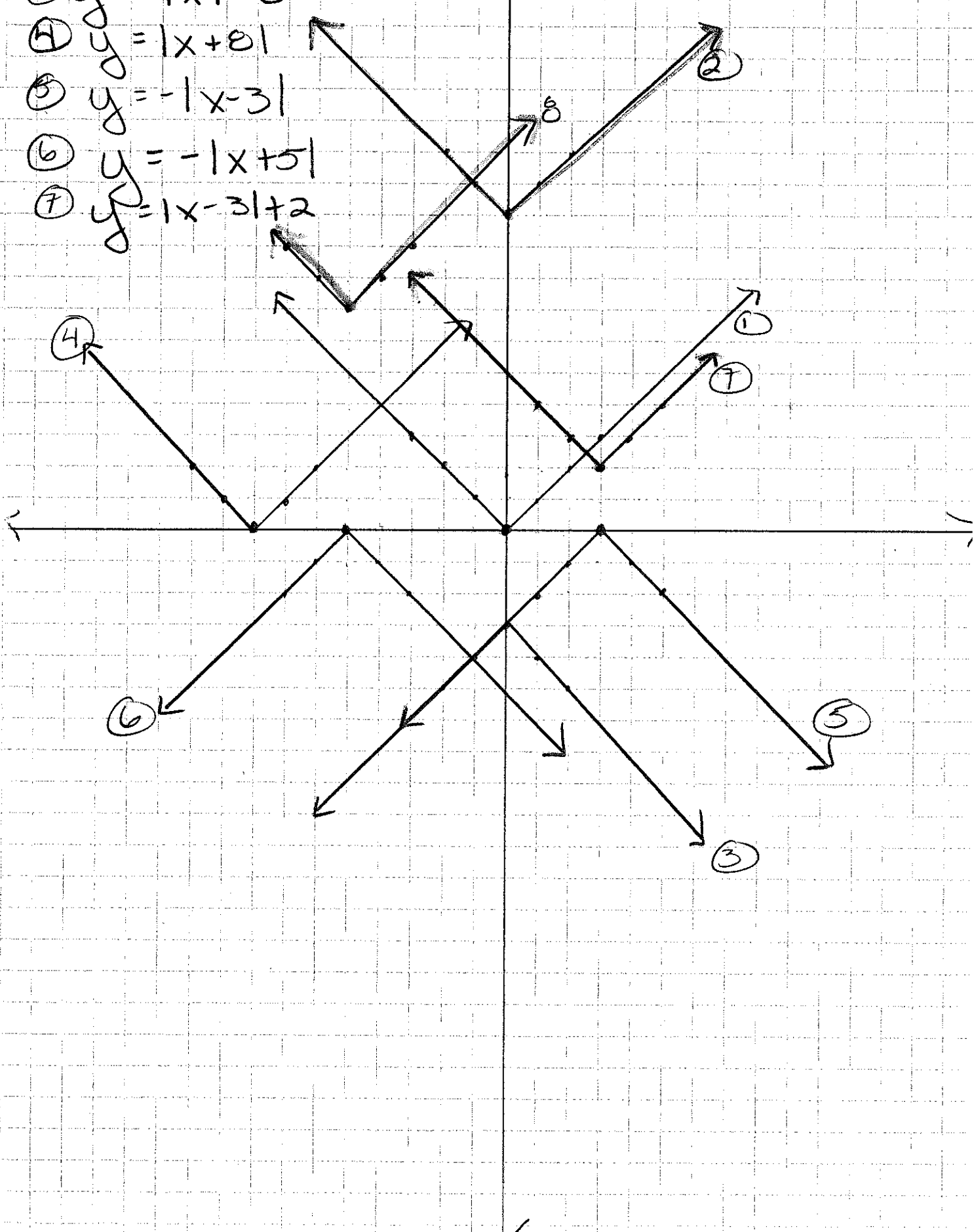
④  $y = |x + 8|$

⑤  $y = -|x - 3|$

⑥  $y = -|x + 5|$

⑦  $y = |x - 3| + 2$

8.  $y = |x + 5| + 7$



FIVE STAR.  
☆☆☆☆☆

FIVE STAR.  
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FIVE STAR.  
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FIVE STAR.  
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