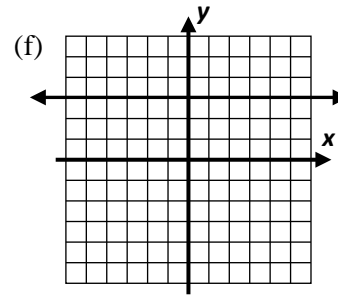
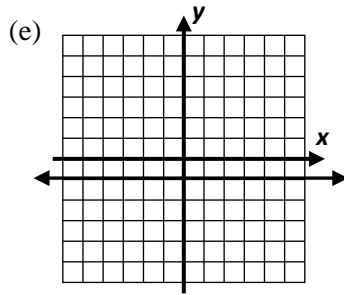
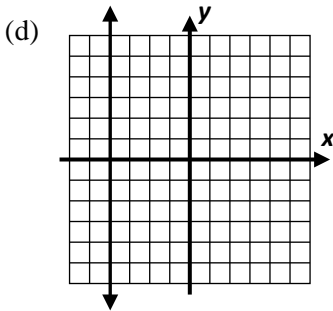
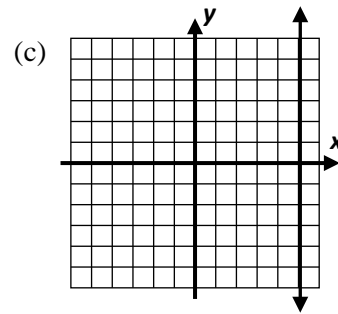
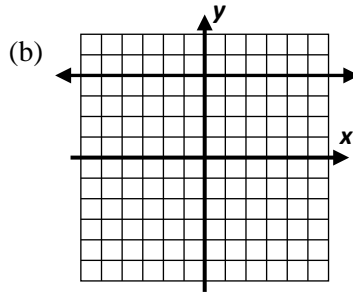
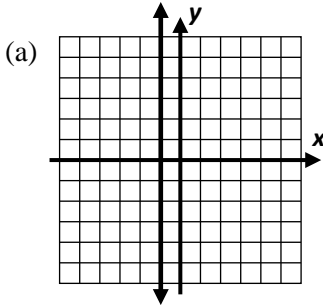


**Algebra 1 CC**  
**Assignment #39**  
**Strange Lines – Vertical and Horizontal**

1. For each of the following, give the equation of the line shown.

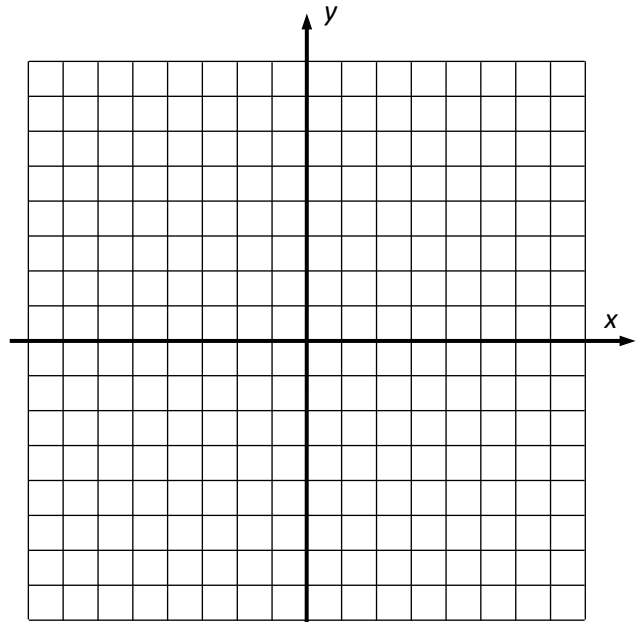


2. Write the equations of lines that fit the following descriptions. Sketch a picture if needed.

- (a) A vertical line that passes through the point  $(4, -7)$ .
- (b) A horizontal line that passes through the point  $(-2, 3)$ .
- (c) A line parallel to the  $x$ -axis that passes through the point  $(-2, 15)$ .
- (d) A line perpendicular to the  $x$ -axis that passes through the point  $(5, 1)$ .

3. Each of the following lines are either horizontal, vertical, or slanted. Label each with its type and then graph on the grid. Label each with its equation.

- |                            | Type: |
|----------------------------|-------|
| (a) $y = \frac{3}{5}x - 2$ | _____ |
| (b) $y = 6$                | _____ |
| (c) $y = -x + 7$           | _____ |
| (d) $x = -4$               | _____ |
| (e) $y = 2x + 1$           | _____ |



R1. A steady snow fall is coming down outside. Prestel decides to measure the depth of the snow on the ground. After 4 hours, the snow is at a depth of 9 inches and after 8 hours it is at a depth of 14 inches.

- Express the information given in this problem as two coordinate pairs,  $(h, d)$ , where  $h$  is the number of hours and  $d$  is the depth of snow.
- Find the slope of the line that passes through these two points. What are its units?
- Find the equation of the line that passes through the two points in  $d = mh + b$  form.
- What was the depth when the snowfall began ( $h = 0$ )? What would the depth be after 12 hours?

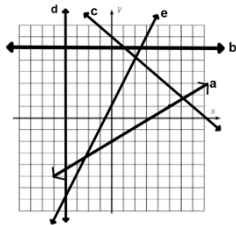
R2. Kwan is driving at a constant speed. After  $1\frac{1}{4}$  hours he has driven a total distance of 90 miles.

- How far will Kwan drive in 2 hours at this rate?
- If  $D$  represents the distance Kwan has driven in miles and  $t$  represents the time he has been driving, in hours, then write an equation for  $D$  in terms of  $t$ .
- Use your equation from (b) to determine how far Kwan drives in 15 minutes.
- Kwan is driving a total of 234 miles. How long will his trip take him, to the nearest tenth of an hour, assuming he travels at this constant rate? Use proper units.

- $x = -1$
  - $y = 4$
  - $x = 5$
  - $x = -4$
  - $y = -1$
  - $y = 3$

- $x = 4$
  - $y = 3$
  - $y = 15$
  - $x = 5$

- slanted
  - horizontal
  - slanted
  - vertical
  - slanted



R1. (a) (4, 9) and (8, 14)

- $\frac{5 \text{ inches}}{4 \text{ hours}}$
- $d = \frac{5}{4}h + 4$
- $d=4$  and  $d=19$

- R2. (a) 144 miles  
 (b)  $D = 72t$   
 (c) 18 miles  
 (d) 3.3 hours