3.3 X and Y INTERCEPTS

X-intercept is the point where the line crosses the x-axis.
Y-intercept is the point where the line crosses the y-axis.

GIVE THE X AND Y INTERCEPTS FOR THE FOLLOWING GRAPHS:

1. \(-2x + y = 4\)
   1. x-intercept:_______
      y-intercept:_______

2. \(x + 2y = 4\)
   2. x-intercept:_______
      y-intercept:_______

3. \(3x + 2y = -6\)
   3. x-intercept:_______
      y-intercept:_______

FINDING INTERCEPTS ALGEBRAICALLY:

TO FIND THE X-INTERCEPT:  LET \(Y = 0\) AND SOLVE FOR \(X\).
TO FIND THE Y-INTERCEPT:  LET \(X = 0\) AND SOLVE FOR \(Y\).

Find the x and y intercepts algebraically for the equation in (1) above: \(-2x + y = 4\)

Find the x and y intercepts for (4) – (6) and use the intercepts to graph the equations:

4. \(-3x + y = 3\)
5. \(2x - 5y = 10\)
6. \(2x + 3y = -9\)
Some lines do not cross both the x-axis and the y-axis. 
X = any number is a vertical line and Y = any number is a horizontal line.

Graph the following lines by plotting points or inspection.

7. X = -3

8. Y = 3

9. 2X = 3

Find the X and Y-intercepts (if they exist) for 7 – 9.

7. x-intercept:________   8. x-intercept:_______   9. x-intercept:_______

   y-intercept:________   y-intercept:_______   y-intercept:_______
3.3 HOMEWORK
page 173; on notebook paper do odd 7-9, 15, 21, 23, all 71-76 and on worksheet do all 25-32, 37, 38, 39, 41 odd 53-59 and page 165; 40 by making a chart

25. [Diagram]

26. [Diagram]

27. [Diagram]

28. [Diagram]

29. [Diagram]

30. [Diagram]