# Left or Right?

The graphs for all these functions are straight lines:

| | | | |
|---|---|---|---|
| y = -2x – 5 | y = -x – 5 | y = x – 5 | y = 2x – 5 |
| y = -2x – 2 | y = -x – 2 | y = x – 2 | y = 2x – 2 |
| y = -2x + 1 | y = -x + 1 | y = x + 1 | y = 2x + 1 |
| y = -2x + 4 | y = -x + 4 | y = x + 4 | y = 2x + 4 |

1.  Find pairs of functions from this list whose graphs do not intersect.

2.  Find pairs of functions from this list whose graphs intersect to the left of the y-axis.

3.  Find pairs of functions from this list whose graphs intersect to the right of the y-axis.

4.  Find pairs of functions from this list whose graphs intersect on the y-axis.

5.  Is there a way to predict *without actually graphing*
    a.  whether the graphs will meet?
    b.  whether they will meet on the y-axis?
    c.  whether they will meet on the left or right of the y-axis?