Math 45 Avoiding Common Errors while Graphing Lines

1) If graphing by plotting two points, you must find two points (x,y) so that both coordinates are integers. (That is, no fractions.) MathXL's graphing tool requires this, and it's a good way to draw an accurate graph on paper, too. If the value you plug in for x results in a fraction for y, try again. You may have to try several numbers, or plug values in for y instead of x, before you have two integer pairs.

2) Draw and label the axes. I'll give you a grid, but you need to draw lines where you want the x-axis and y-axis to be. You don't have to put the axes in the middle – sometimes it works better to shift them to the side or a corner.

NO	YES
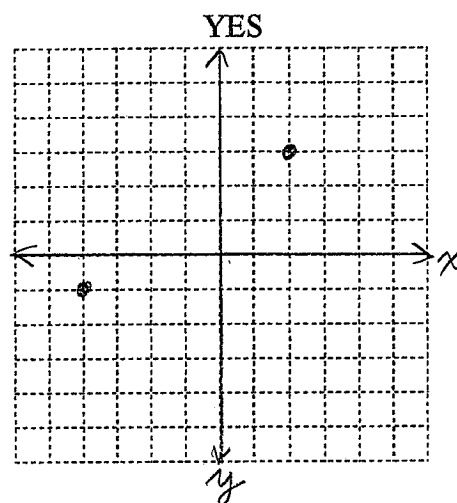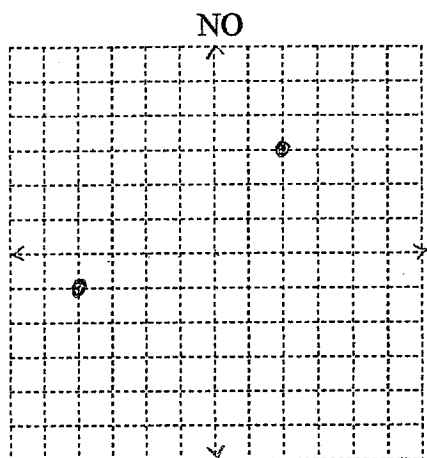
3) Use the grid! Don't change the scale of one block = 1 unit until we get to much harder questions. The points you plot should be where the lines cross. This will make your graph neater and more accurate.

NO	YES
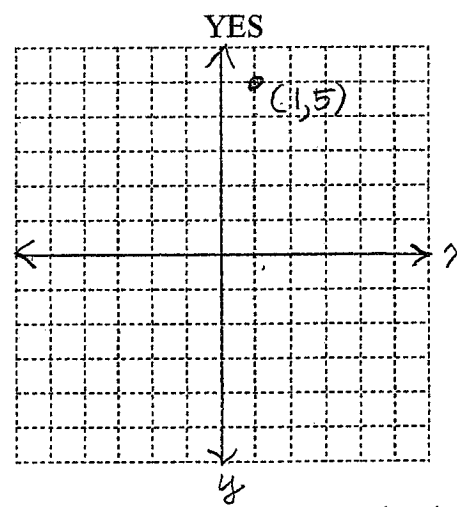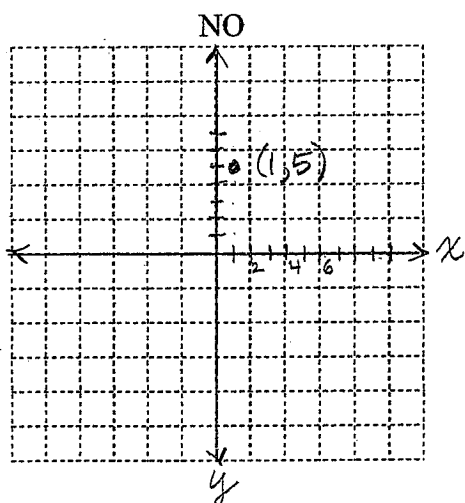
4) In chapter 3, we are graphing lines, not line segments. Your lines should have arrowheads at both ends, indicating that the line continues infinitely in both directions. Do not draw line segments, which stop at points or dots, rather than arrows.
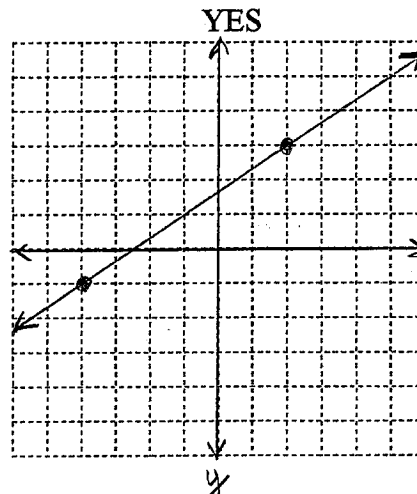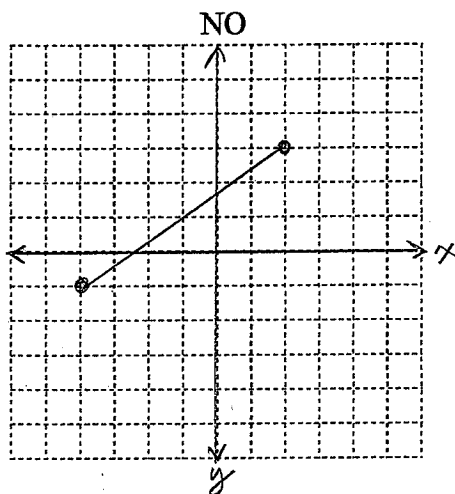
NO	YES

5) Extend your line to the edge of the given grid. This is to help you check that your line is accurate, particularly that you have the correct slope.

NO   YES

6) Be careful when plotting points, particularly if you are prone to making sign errors. Having one sign wrong when graphing a point will put the point in an entirely different quadrant, which can make the problem much more difficult or confusing. If you are prone to sign errors, it may help to label both ends of your axes with the signs indicating the directions.
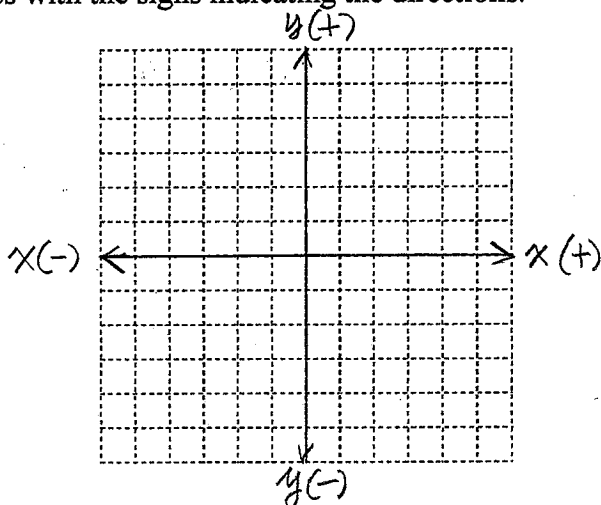
7) When plotting points, be systematic: always find the x-direction first (left or right), and then the y (up or down). This helps reduce errors of mixing up the x- and y-coordinates.