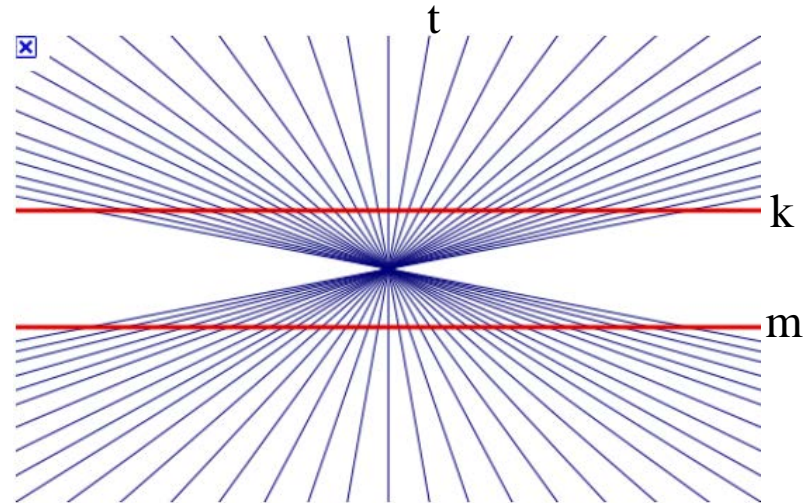


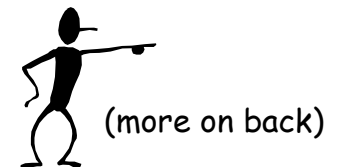
Parallel Lines Optical Illusion



This picture is a common optical illusion using parallel lines. Lines m and k seem to bend in the middle.

1. Lay a ruler or straight edge along each of lines m and k . Do they really bend? Explain.

2. Is $m \parallel k$? Use a protractor and line t , as a transversal, to decide. In the space below explain your procedure and state which theorem(s) you use to justify your conclusion.



3. In the space below, reproduce the illusion using a ruler and protractor. Explain which parallel line theorem you use to justify that m is drawn perfectly parallel to k . For an even better challenge, use only a compass and straight edge to draw the picture (use light compass marks that are barely visible to help the illusion.)

4. Use the internet to research other optical illusions that involve parallel lines. Attach a sample picture of your findings.