

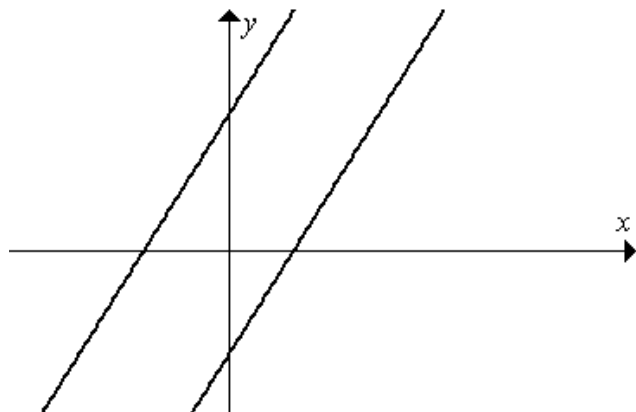
1 Visualizing SQUARE ROOTS

How can you make a ruler capable of measuring square roots?

② How Do You *KNOW* the Lines Are Parallel or Perpendicular?

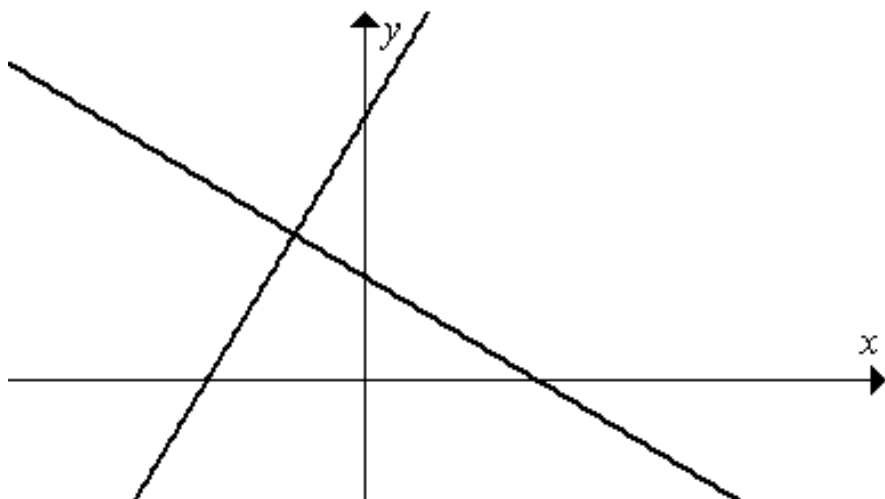
Given: $y_1 = 1.6x + 2.8$ and $y_2 = 1.6x - 2$

Prove: The two lines are parallel.



Given: Two lines whose slopes when multiplied equal to negative one.

Prove: The two lines are perpendicular.



3 Getting to the CENTER of Things

Can a single circle be drawn through any three non-collinear points on the coordinate plane?

Before tackling the above task, let's start with the following:

Find the center of the circle that contains the points $(3, 6)$, $(1, 1)$, and $(5, 2)$

4 Classifying Triangles WITHOUT Using a Protractor

Given two edges of known length, what are the lengths for a third edge that will result in the formation of an obtuse triangle?

As before, let's start with a concrete version:

Using Geometry-based reasoning, show that a triangle with sides measuring 6, 20, and 23 is an obtuse triangle.