



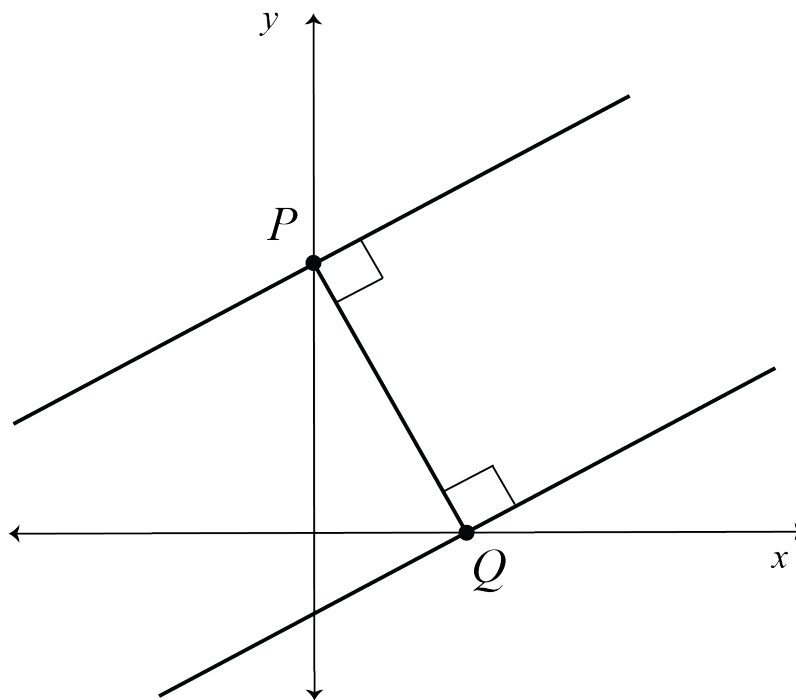
## Problem of the Week

### Problem D

#### Parallel Puzzle

Two distinct lines are drawn such that the first line passes through point  $P$  on the positive  $y$ -axis and the second line passes through point  $Q$  on the positive  $x$ -axis. Line segment  $PQ$  is perpendicular to both lines.

If the line through  $P$  has equation  $y = mx + k$ , then determine the  $y$ -intercept of the line through  $Q$  in terms of  $m$  and  $k$ .



SUGGESTION: If you are finding the general problem difficult to start, consider first solving a problem with a specific example for the line through  $P$ , like  $y = 4x + 3$ , and then attempt the more general problem.

