1 Take regular size piece of blank, un-ruled paper in portrait orientation and make a 1’ long line segment from the bottom-left (0) to the appropriate spot on the top side (A). Mark that line as being “1” long.

2 Connect point at by a 6” line segment to the right side of the paper, to a point K. Also connect K back to O. Neither measure nor label AK or OK for length! Proceeding from the top-left counter-clockwise, label the page corners as B, C, and D.

3 Label ∠AOK=θ and ∠KOD=φ. Now label all appropriate other angles as φ or θ + φ. Leave complementary angles unmarked. Is there another θ on the page?

4 Why can we rightly label OK as cos(θ)? How do you know?

5 By the same token, what can we label AK?

6 Is it true, the way we are labeling these sides? Measure angle θ and confirm AK is that many feet long.

7 Label OD as a product of cosines, using the definition of cosine.

8 Continue labeling all the segments.

9 Write an equation relating the left and right edges of the paper.

10 Write an equation relating the top and bottom edges of the paper. Solve for cos(θ+φ).

11 Describe what you think the point of this problem set is, in technical vocabulary, using whole sentences.