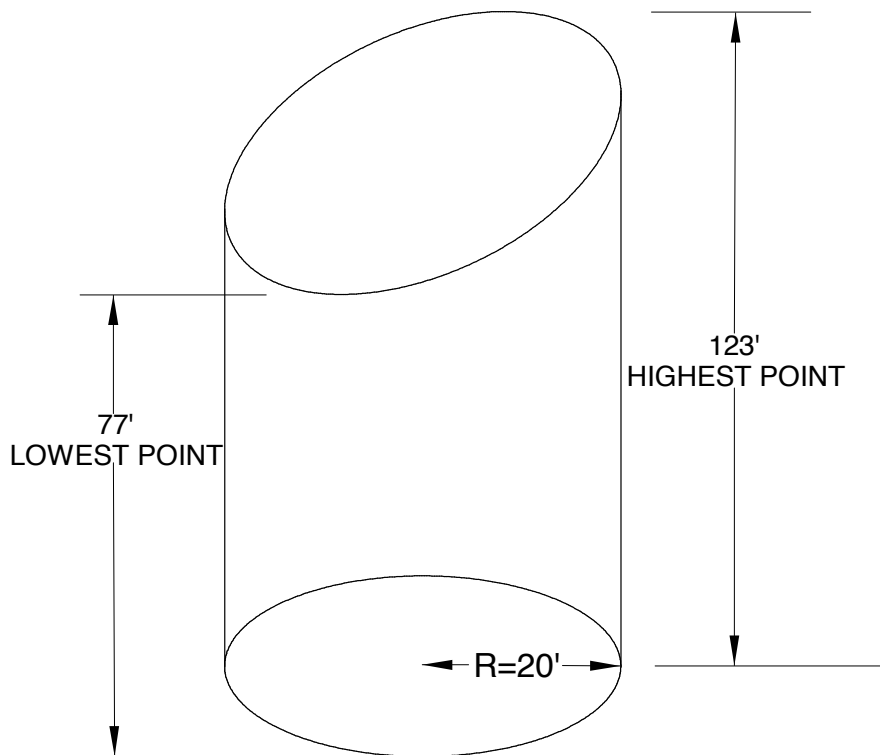


Problem  
**162**

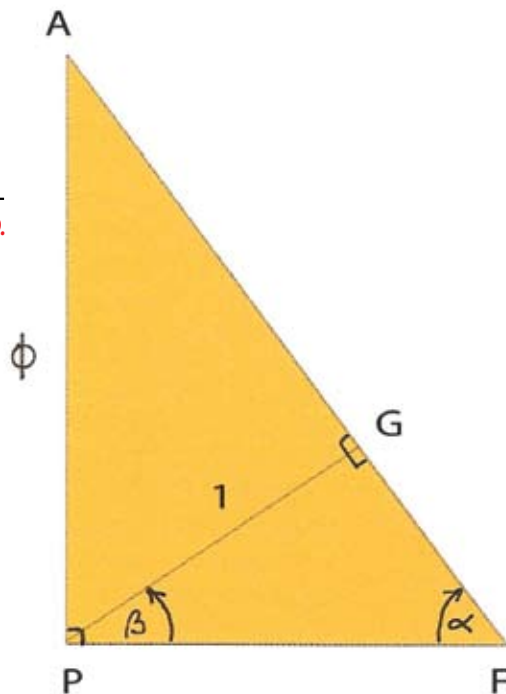
by Dave Lindell, L.S.

A cylindrical silo has a top that is slanted as shown. What is the volume of the silo? What is the surface area of the top and sides?



Problem  
**163**

by Benjamin Bloch, Ph.D.



Given:

Three right triangles, and  $AP = \phi$ ,  $PG = 1$ .

Where  $\phi = \frac{1}{2}(1 + 5^{1/2})$

Hint:  $1 + \phi = \phi^2$

Determine:

1. angles  $\alpha$  and  $\beta$
2. The significances of  $\alpha$  and  $\beta$  (See the May 2008 Guest Editorial)

Determine the following sides as functions of  $\phi$

3.  $AG$
4.  $PF$
5.  $GF$
6. What is the significance of  $AG/GF$ ?