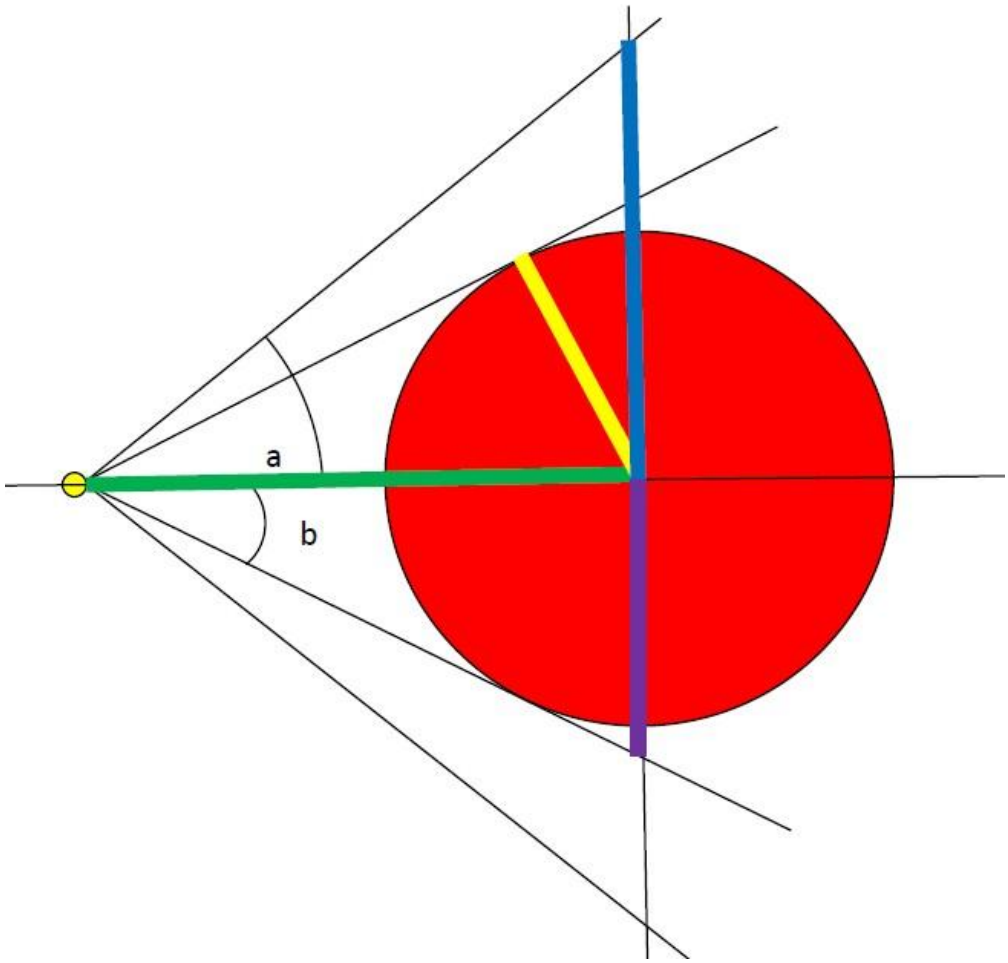

Yellow Circle: Camera
Red Circle: Ball
Green Line: d, Distance from ball to camera
Yellow Line: R, Radius of the ball
Purple Line: l_1
Blue Line: l_2
Height of the picture from the camera: H
Height of the ball in the picture from the camera: h
The angle of the viewing range of the camera: a
The angle b: as illustrated

(1) $h/H=l_1/l_2=\tan(b)*d/\tan(a)*d=\tan(b)/\tan(a)$
(2) $\sin(b)=R/d$

We can use these two equations to get the two unknown factors (b and d).