h = height of eye

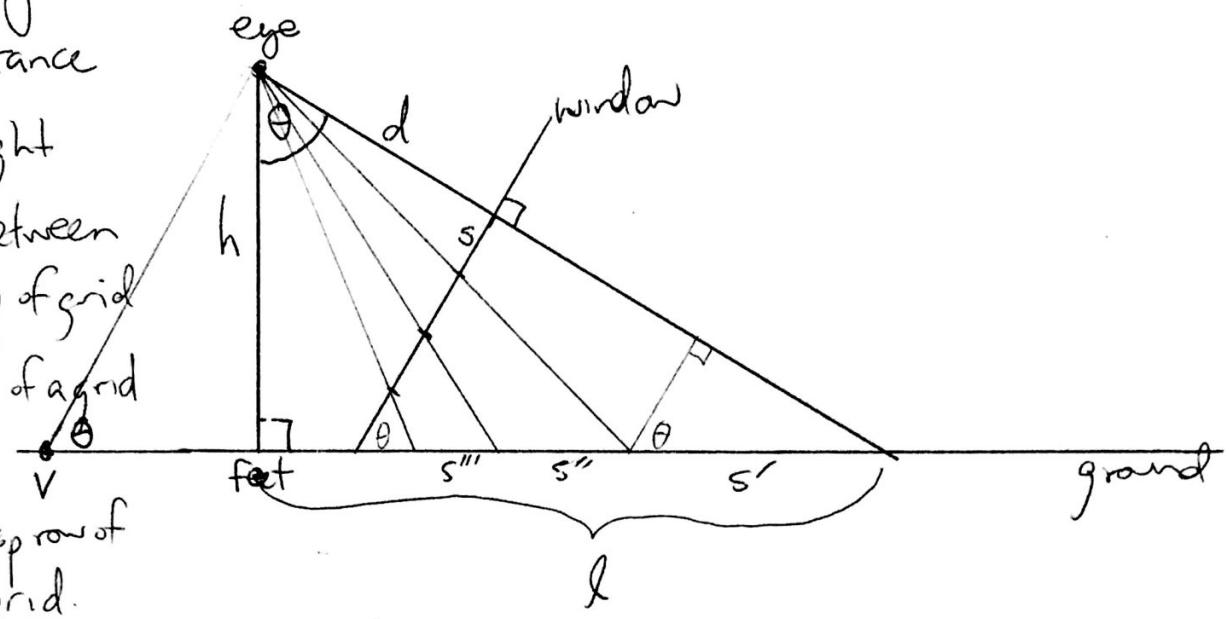
d = viewing distance

θ = angle of sight

ℓ = distance between feet and top of grid

s = length of side of a grid square

s' = height of top row of projected grid.



$$\tan\theta = \frac{\ell}{h} \Rightarrow \boxed{\ell = h\tan\theta}$$

By similar Δs, $\dfrac{d}{s} = \dfrac{\frac{h}{\cos\theta} - s'\sin\theta}{s'\cos\theta}$

Solving for s', $\boxed{s' = \dfrac{sh}{\cos\theta(d\cos\theta + s\sin\theta)}}$ or in terms of $\tan\theta$: $\boxed{s' = \dfrac{sh}{(1+\tan^2\theta)(d+s\tan\theta)}}$

distance from eye to V, the vanishing pt of grid lines: $\boxed{\overline{V\,\text{feet}} = \dfrac{h}{\tan\theta}}$

Alternate way of finding s'':

Let the distance from V to the top of the projected grid be L.

Then $\dfrac{L - s'' - s'}{s''} \cdot \dfrac{s'}{L} = 1$. Solving for s'', $s'L - s''s' - (s')^2 = s''L + s''s'$

$s''(L+s') = s'L - (s')^2 \Rightarrow \boxed{s'' = \dfrac{s'(L-s')}{L+s'}}$ then $\boxed{s''' = \dfrac{s''(L-s'')}{L+s''}}$ etc.