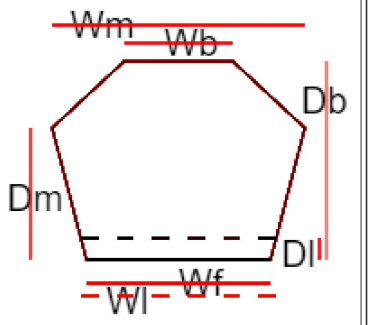
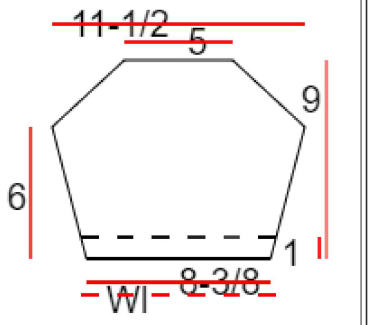
## Block Description

| Description | variable | inches | |
|---|---|---|---|
| Width across front | Wf | 8-3/8 | 8.375 |
| Width across middle | Wm | 11-1/2 | 11.5 |
| Width across back | Wb | 5 | 9 |
| Depth to middle | Dm | 6 | 6 |
| Depth to back | Db | 9 | 9 |
| Depth to lip | Dl | 1 | 1 |
| Width across lip (dashed line) | Wl | calcuatated | 8.895833 |
| Thickness(height) | t | 4 | 4 |




# Note: The author suspects that these dimensions are slightly in error. See the calculations below

The following calculations are done to consider to consider the blocks placed in a ring with with no gaps between P3 and P4 and P1 and P2 (Figure 5).

The author suspects that β and δ should be 30 degrees rather than 29.19 degrees. That is rather minor, but leaves one to wonder when cumulative error would be significant.

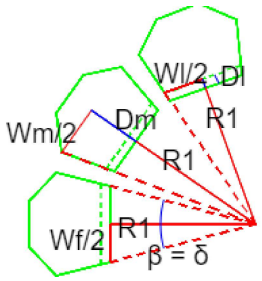



Figure 3

$R_1 = D_m W_f/(W_m-W_f)$

$(W_f/2)/(R_1) = (W_m/2)/(R_1+D_m)$ ratio of parts of similar triangles are proportional

$W_f/(R_1) = W_m/(R_1+D_m)$

$(R_1+D_m)W_f = (R_1)W_m$

$R_1W_f + D_mW_f = R_1W_m$

$D_mW_f = R_1W_m - R_1W_f$

$D_mW_f = R_1(W_m-W_f)$

$D_mW_f/(W_m-W_f) = R_1$

$R_1 = D_mW_f/(W_m-W_f)$

$\beta = 2*\arctan( W_f/(2*R_1))$ (**Eqn 1:** Landscape Block Circle Algorithm : Equations 1 to 4 )

$\delta = 2*\arctan(W_m/(2*(R_1 + D_m)))$ (**Eqn 2:** Landscape Block Circle Algorithm : Equations 1 to 4 )

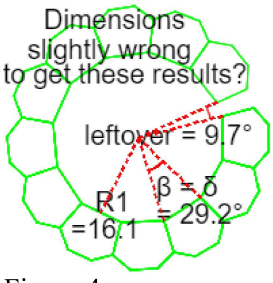



Figure 4

$W_l = W_f(R_1+D_l)/(R_1)$

$(W_f/2)/(R_1) = (W_l/2)/(R_1+D_l)$ ratio of parts of similar triangles are proportional

$W_f/(R_1) = W_l/(R_1+D_l)$

$W_f(R_1+D_l)/(R_1) = W_l$

$W_l = W_f(R_1+D_l)/(R_1)$

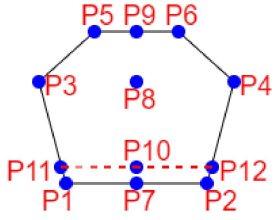



Figure 5