$$D_{\mathrm{ay}}(d,m,y) = \mathrm{mod}\left(d + 2(m-1) + \left\lfloor\frac{m}{2}\right\rfloor + \left\lfloor\frac{m-1}{8}\right\rfloor \mathrm{mod}(m,2) - \left\lceil\frac{m-2}{12}\right\rceil\left(2 - \frac{1+(-1)^{\left\lceil\frac{\mathrm{mod}(y,4)}{4}\right\rceil}}{2} + \left(1 - \frac{1+(-1)^{\left\lceil\frac{\mathrm{mod}(y,400)}{400}\right\rceil}}{2}\right)\left(\frac{1+(-1)^{\left\lceil\frac{\mathrm{mod}(y,100)}{100}\right\rceil}}{2}\right)\right) + 5\cdot\mathrm{mod}\left(\left\lfloor\frac{y-1}{100}\right\rfloor,4\right) + 5\cdot\left\lfloor\frac{\mathrm{mod}(y-1,100)}{4}\right\rfloor + \mathrm{mod}\left(\mathrm{mod}(y-1,100),4\right),7\right)$$