$$e1 = (\frac{M-1}{M})^{N-M}\frac{1}{M}floor\frac{M}{2}$$

$$e2 = \frac{1}{M}(\frac{M-1}{M})^{N}\frac{M^2}{2M-1}[(\frac{M}{M-1})^{2*floor\frac{N}{2}} - (\frac{M}{M-1})^{2*floor\frac{M}{2}}]$$

$finalanswer = e1 + e2$

By Chris Shannon from Calgary Canada. I've attached a matlab file that executes these equations based on M and N, so they can be verified to your (probably simplier) solution.

Please don't hesitate to contact me if you wish the intermediate equations. cjshanno@ucalgary.ca