## Extending the Ackermann function

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Interpret arguments as coefficients of powers of  $\omega$ : original function accepts ordinal  $<\omega^2$ 

$$A(n) = n+1$$
 
$$A(\omega(m+1)) = A(\omega m+1)$$
 
$$A(\omega(m+1) + (n+1)) = A(\omega m + A(\omega(m+1) + n))$$