```matlab
function [Z] = joshStumpffZ(z,n)
% AERO 351 code
% Generates the first n terms of the stumpff coeffcients for @S(z) and @C(z)
 in a vector
% for use as companion function with joshStrumpffCoeffs
% @S(z) == sum(S.*Z) == polyval(flip(S),z) : where S given by (-1)^k*(1/
factorial(2*k+2))
% @C(z) == sum(C.*Z) == polyval(flip(C),z) : where C given by (-1)^k*(1/
factorial(2*k+3))
arguments
    z (1,1)
    n (1,1) {mustBePositive,mustBeInteger} = 15;
end
Z = ones(1,n);
for i = 2:n
    Z(i) = z*Z(i-1);
end
end
```

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