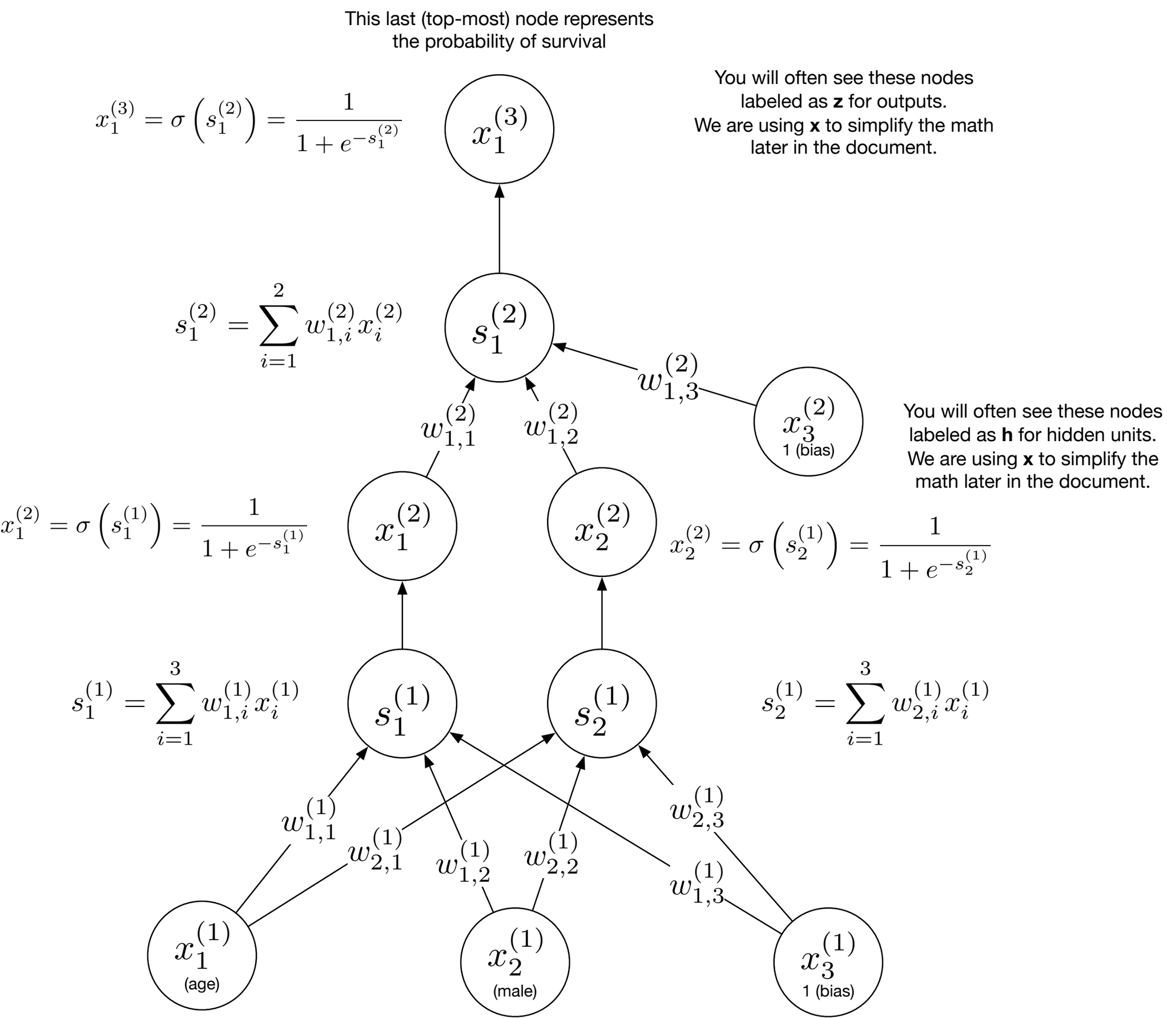
This last (top-most) node represents the probability of survival
$x_1^{(3)} = \sigma\left(s_1^{(2)}\right) = \frac{1}{1+e^{-s_1^{(2)}}}$
$x_1^{(3)}$
You will often see these nodes labeled as **z** for outputs. We are using **x** to simplify the math later in the document.
$s_1^{(2)} = \sum_{i=1}^{2} w_{1,i}^{(2)} x_i^{(2)}$
$s_1^{(2)}$
$w_{1,3}^{(2)}$
$w_{1,1}^{(2)}$
$w_{1,2}^{(2)}$
$x_3^{(2)}$
1 (bias)
You will often see these nodes labeled as **h** for hidden units. We are using **x** to simplify the math later in the document.
$x_1^{(2)} = \sigma\left(s_1^{(1)}\right) = \frac{1}{1+e^{-s_1^{(1)}}}$
$x_1^{(2)}$
$x_2^{(2)}$
$x_2^{(2)} = \sigma\left(s_2^{(1)}\right) = \frac{1}{1+e^{-s_2^{(1)}}}$
$s_1^{(1)} = \sum_{i=1}^{3} w_{1,i}^{(1)} x_i^{(1)}$
$s_1^{(1)}$
$s_2^{(1)}$
$s_2^{(1)} = \sum_{i=1}^{3} w_{2,i}^{(1)} x_i^{(1)}$
$w_{1,1}^{(1)}$
$w_{2,1}^{(1)}$
$w_{1,2}^{(1)}$
$w_{2,2}^{(1)}$
$w_{2,3}^{(1)}$
$w_{1,3}^{(1)}$
$x_1^{(1)}$
(age)
$x_2^{(1)}$
(male)
$x_3^{(1)}$
1 (bias)