$$z_lpha = \Phi^{-1}(0.95) = \boxed{1.6449}$$

InverseCDF[NormalDistribution[0, 1], 0.95]

$$p = P(Z > 1.5583) = 1 - \Phi(1.5583) \approx 0.0596$$

1-CDF[NormalDistribution[0, 1], 1.5583]

Or

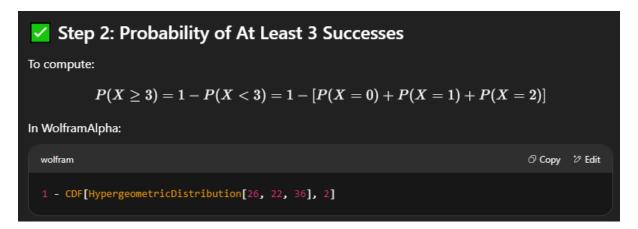
Z > 1.5583

You're working with a hypergeometric distribution, and you've written the PMF correctly:

$$P(X=x)=rac{inom{26}{x}\cdotinom{22}{36-x}}{inom{48}{36}}$$

This describes drawing 36 items from a population of 48, where:

- 26 are "successes" (e.g., red balls),
- 22 are "failures" (non-red balls),
- X is the number of successes drawn.



1 - CDF[HypergeometricDistribution[26, 22, 36], 2]

Goal	Input
Define distribution	HypergeometricDistribution[26, 22, 36]
Exact probability	PDF[HypergeometricDistribution[26, 22, 36], x]
Cumulative probability	CDF[HypergeometricDistribution[26, 22, 36], x]
At least k successes	1 - CDF[HypergeometricDistribution[26, 22, 36], k - 1]
Plot	Plot[PDF[HypergeometricDistribution[26, 22, 36], x], {x, 0, 26}]