4a Example:

$$p = \frac{72}{120}$$

$$n = 10$$

b. $P(X \geq 8)$

$= 1 - P(X < 8)$

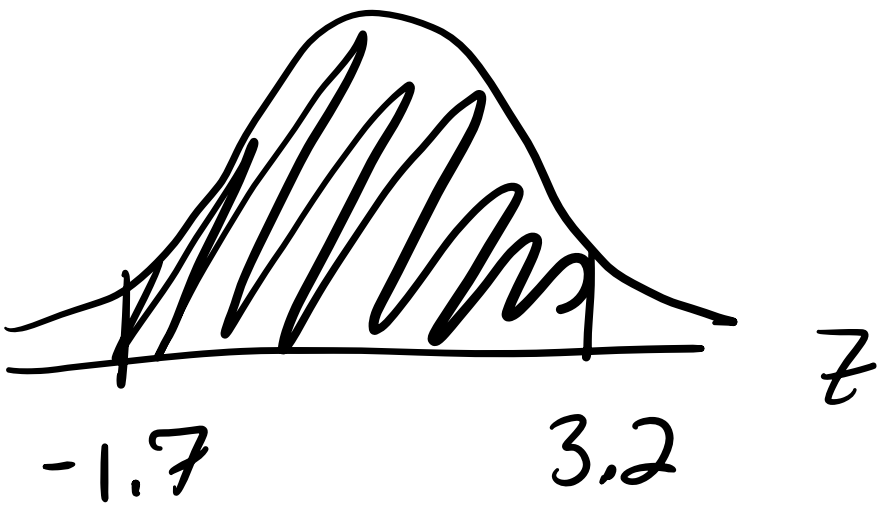
$= 1 - P(X \leq 7)$

$= 1 - \text{BINOM.DIST}\left(7, 10, \frac{72}{120}, 1\right)$

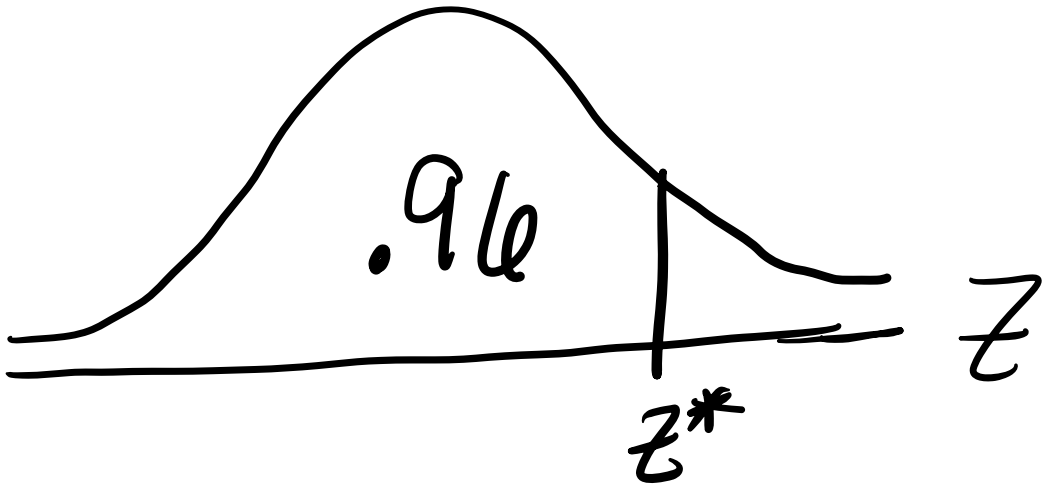
4b Example:

A.

B.



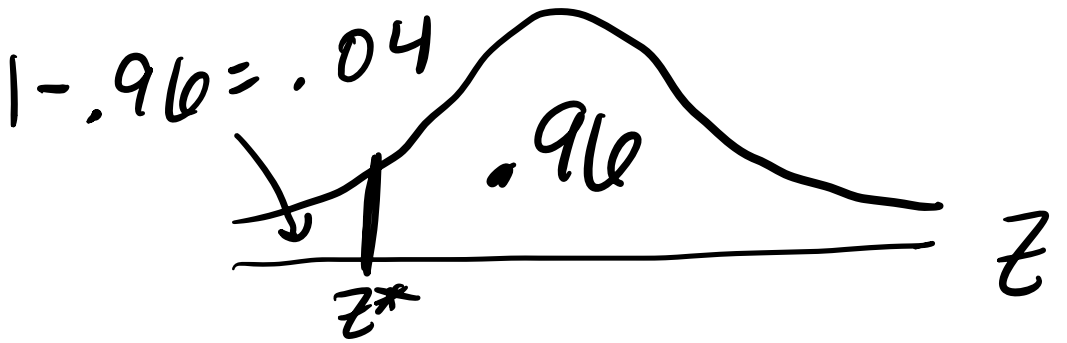
c.



$$P(Z \leq z^*) = 0.96$$

$$z^* = \text{NORM.S.INV}(.96)$$

$$P(Z \geq z^*) = 0.96$$

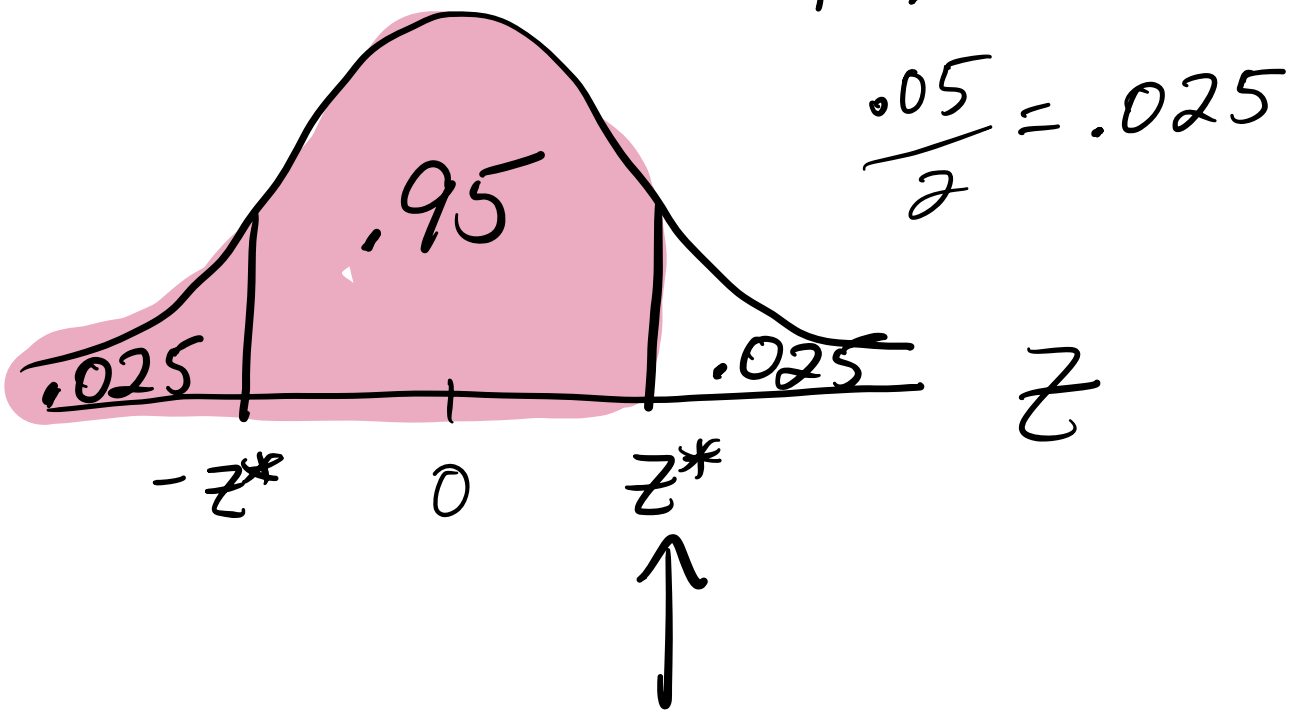


$z^* = NORM.S.INV(.04)$

D. $P(-z^* \leq Z \leq z^*) = 0.95$

$1 - .95 = .05$

$\frac{.05}{2} = .025$



$z^* = NORM.S.INV(.95 + .025)$

$= NORM.S.INV(0.975)$

4c Example:

$\sigma = 5$

$\mu = 38$

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1. $P(x < 32)$

$= \text{NORM.DIST}(32, 38, 5, 1)$

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2. $P(x > 40)$

$= 1 - \text{NORM.DIST}(40, 38, 5, 1)$

3. $P(35 \leq X \leq 40)$

$= \text{NORM.DIST}(40, \mu, \sigma, 1)$

$- \text{NORM.DIST}(35, \mu, \sigma, 1)$