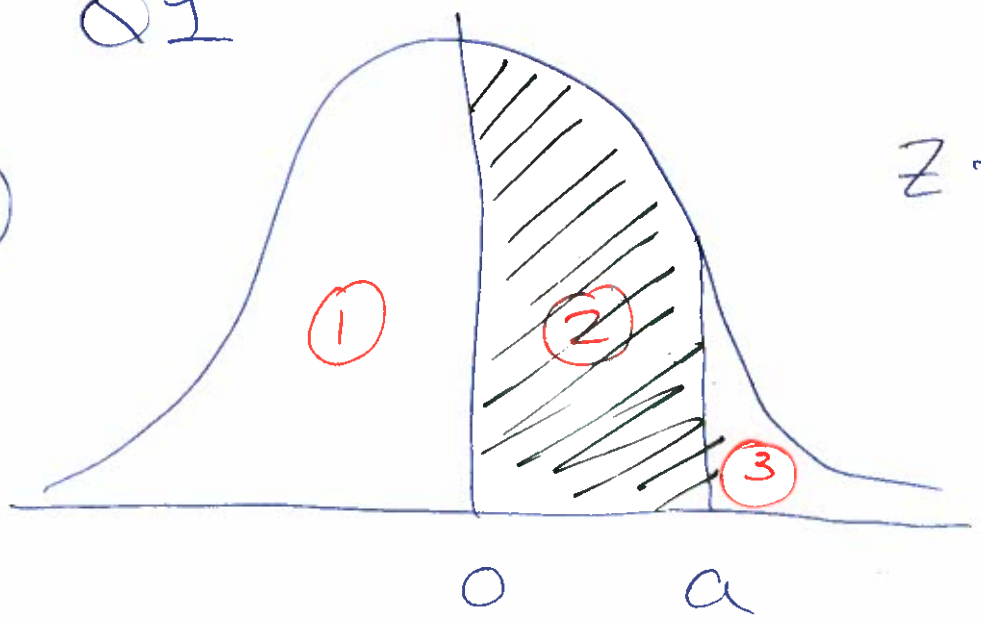
Q1

(A)



$Z \sim N(0, 1^2)$

AREAS

(1) $= P(Z \leq 0) = 0.5$ (by DEFN)

(2) $= P(0 \leq Z \leq a) = 0.1915$

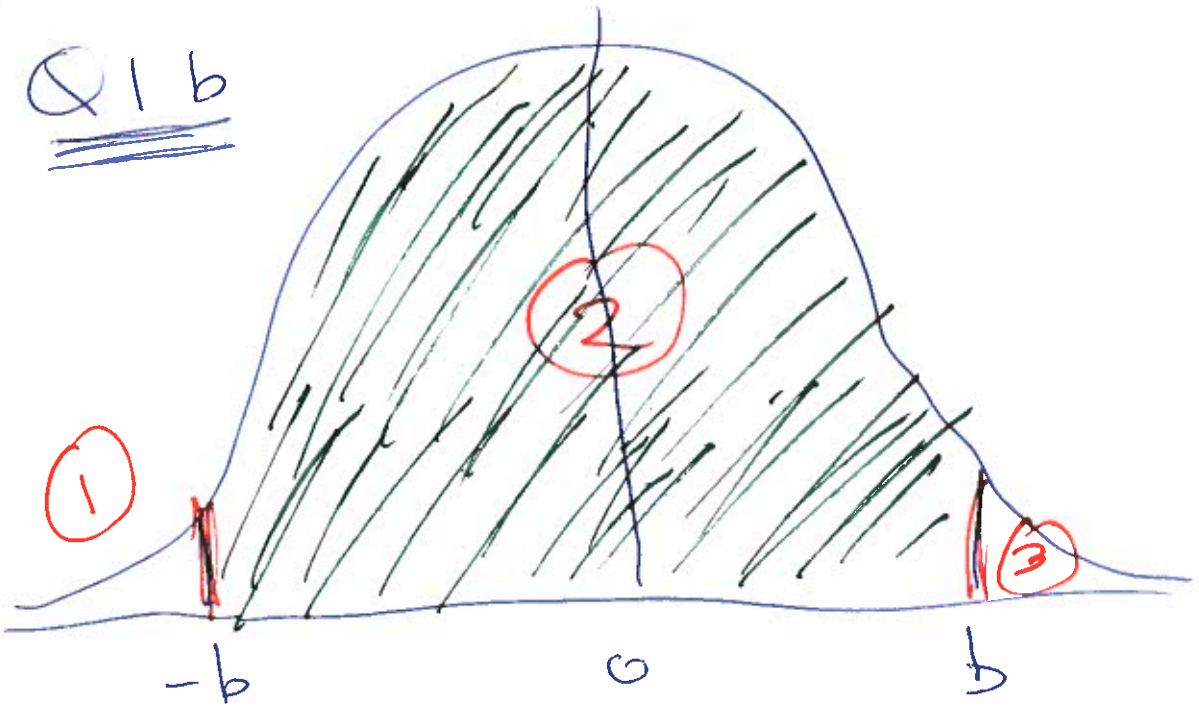
(3) must be 0.3085

$$P(Z \geq a) = 0.3085$$

Inspecting MB3, we see that

$$a = 0.5$$

Q1 b



(2) $P(-b \leq Z \leq b) = 0.90$

by symmetry

(1) = (3)

∴ both must equal 0.05

∴ $P(Z \geq b) = 0.05$

by inspection of MB3

$b = 1.64$ or 1.65

(or split difference $b = 1.645$)