Finding Critical Values of Z

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- Another way to say this: The critical value z_α cuts off a "right-hand tail" whose area is α

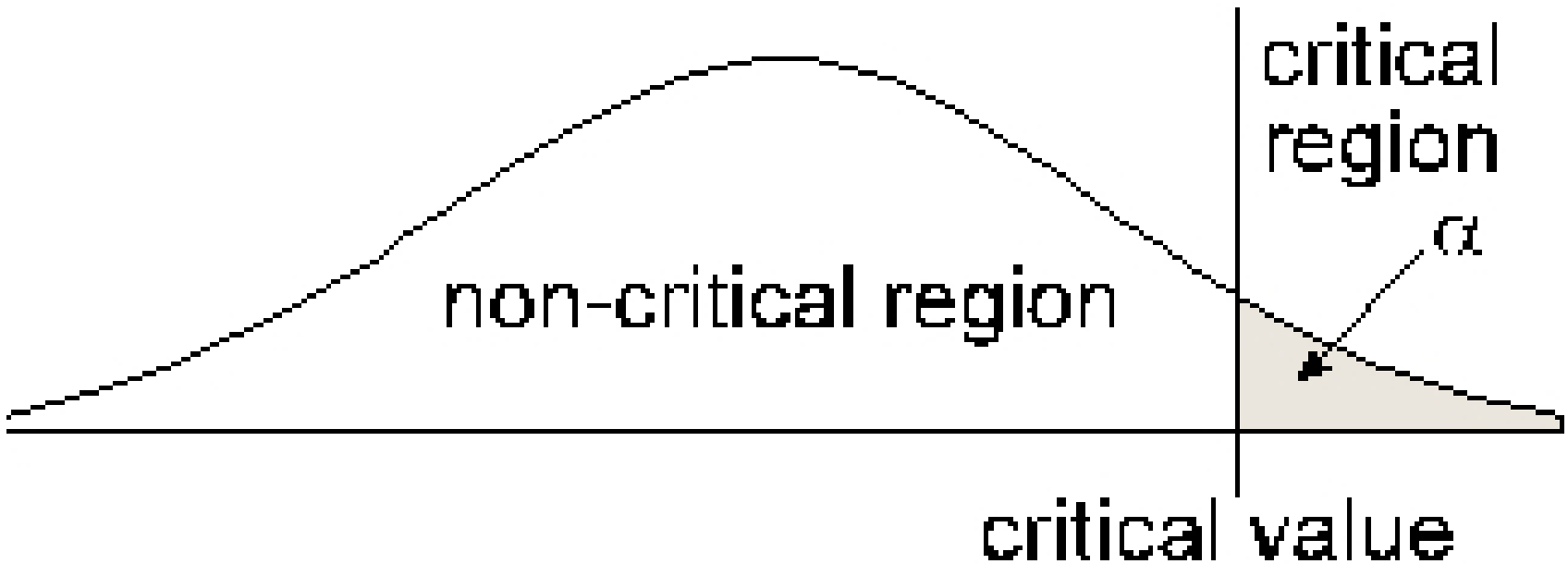

illustration from
https://people.richland.edu/james/lecture/m170/ch09-typ.html

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- We look in the body of the table for an area which is as close as possible to 0.05.

-1.6	0.0548	0.0537	0.0526	0.0516	0.0505	0.0495

Example: Finding a critical value using the cdf Table (continued

- This is what we found when we looked in the body of the table for an area which is as close as possible to 0.05.

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- 0.05 is halfway in between the areas 0.505 and 0.495, so it seems reasonable to take the z-value which is halfway in-between.

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- So $z_{0.05} \approx 1.645$

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- The z-values associated with those areas are -1.64 and -1.65
- Halfway in between is -1.645, and remember we want the positive z
- So $z_{0.05} \approx 1.645$
- A more conservative (safe) approach is to always take the larger absolute value, so alternatively we could take $z_{0.05} \approx 1.65$