

Typographical and spelling errors

can be "non-word" errors or "word errors".

A non-word error is not a real word, as when "the" is typed "teh". A word error is a real word but not the right word, as when "lose" is typed "loose". When students are asked to

write a 250-word essay without spellchecking,

the number of non-word errors, X , has the following info: $\mu_x = 2.5$ and $\sigma_x = 1.136$ and the dist. of word errors has $\mu_y = 1$ and $\sigma_y = 1.1$.

a) Find mean and std dev of $Y - X$.

b) Find prob. that a randomly selected stud. makes more word errors than non-word errors.

$$a) \mu_{y-x} = 1 - 2.5 = -1.5$$

$$\sigma_{y-x} = \sqrt{(1.136)^2 + (1.1)^2} = 1.581$$

b) Word error > non-word error

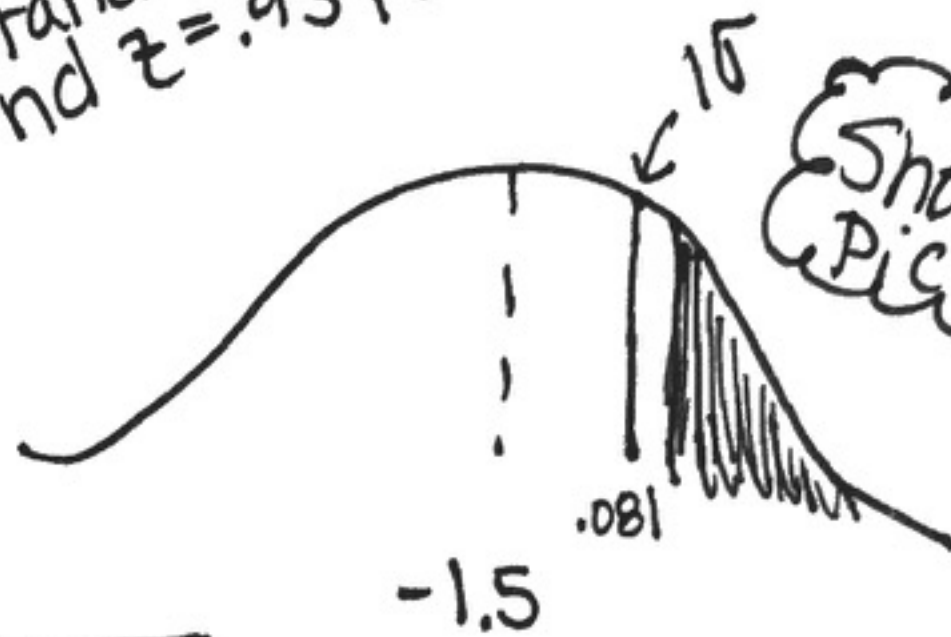
$$WE - NWE > 0$$

$$Z = \frac{0 - (-1.5)}{1.581} = .95$$

← use standard norm. prob. table to find $z = .95$, so $p = .8289$

Show work!

Show prob.



$$1 - .8289 = .1711$$