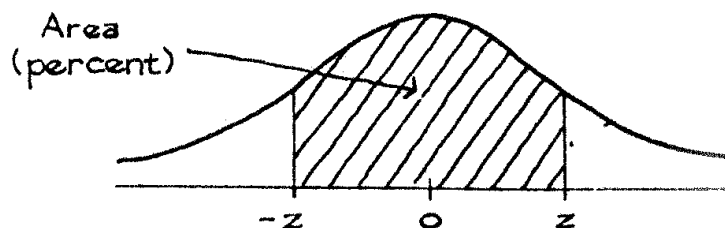


A SHORT TABLE OF THE NORMAL DISTRIBUTION

z	Area (percent)
0.0	0
0.1	8
0.2	16
0.33	25
0.50	38
0.58	44
0.67	50
0.75	55
1.00	68
1.25	79
1.50	87
1.65	90
1.75	92
2.00	95
2.25	98
3.00	99.7



Some useful formulas for this exam:

For regression of y on x , with correlation coefficient r :

$$\text{RMS error} = \sqrt{1 - r^2} \times (\text{SD of } y).$$

For a number of draws, with replacement, from any “box”:

$$\text{EV of sum} = (\text{number of draws}) \times (\text{box average})$$

$$\text{EV of average} = (\text{EV of sum}) / (\text{number of draws}) = \text{box average}.$$

$$\text{SE of sum} = \sqrt{\text{number of draws} \times (\text{SD of box})}$$

$$\text{SE of average} = (\text{SE of sum}) / (\text{number of draws}) = (\text{SD of box}) / \sqrt{\text{number of draws}}$$

For a “box” with tickets of 0’s and 1’s:

The sum is the number (or count) of 1’s in the draws made.

The average is the proportion of 1’s in the draws made.

$$\text{Box average} = (\text{fraction of 1})$$

$$\text{SD of box} = \sqrt{\text{fraction of 0} \times \text{fraction of 1}}$$

If two chance outcomes have standard errors SE_1 and SE_2 , then the standard error (SE) for the difference is:

$$\text{SE for difference} = \sqrt{(SE_1)^2 + (SE_2)^2}.$$