

03/25/2019

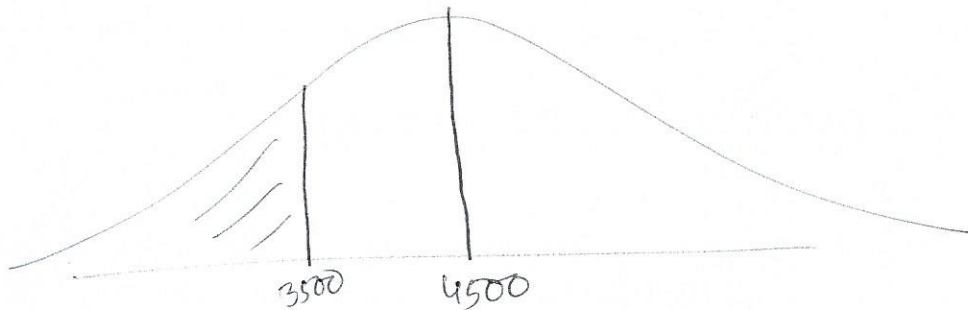
Next Test: 8th April (Monday)

Upcoming: Project 2.

Normal distribution defined by mean  $\mu$  and standard deviation  $\sigma$ .

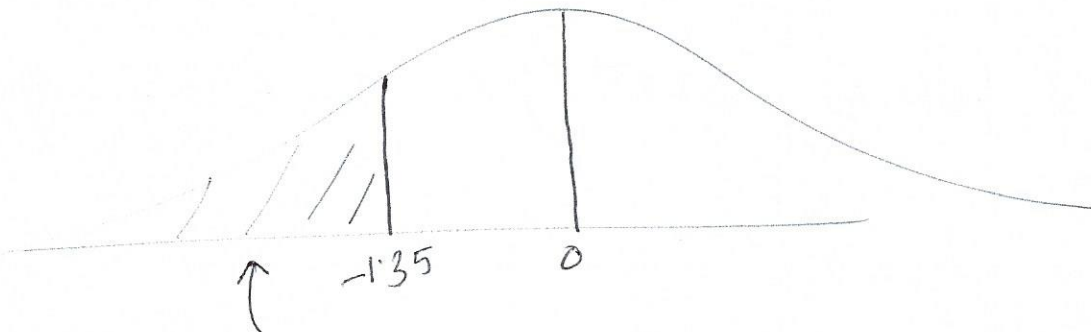
Transformed into std normal,  $N(0, 1)$   
 $\mu \rightarrow 0$   $\sigma \rightarrow 1$

①



$$z = \frac{3500 - 4500}{740}$$

$$z = \frac{-1000}{740} = -\frac{50}{37} = -1.351$$



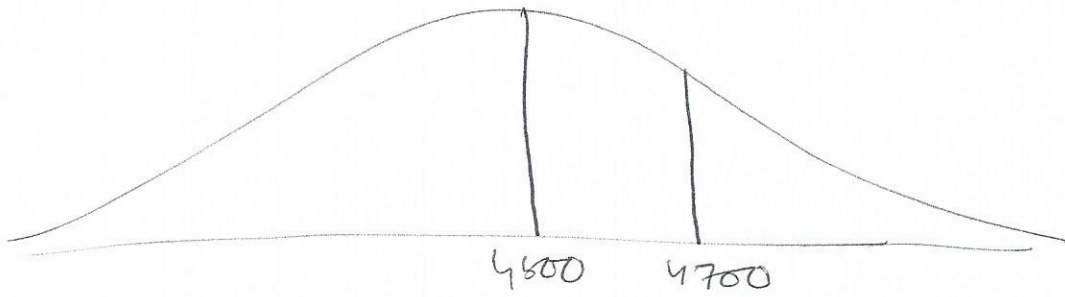
$$0.08851$$

What % is below \$3500?

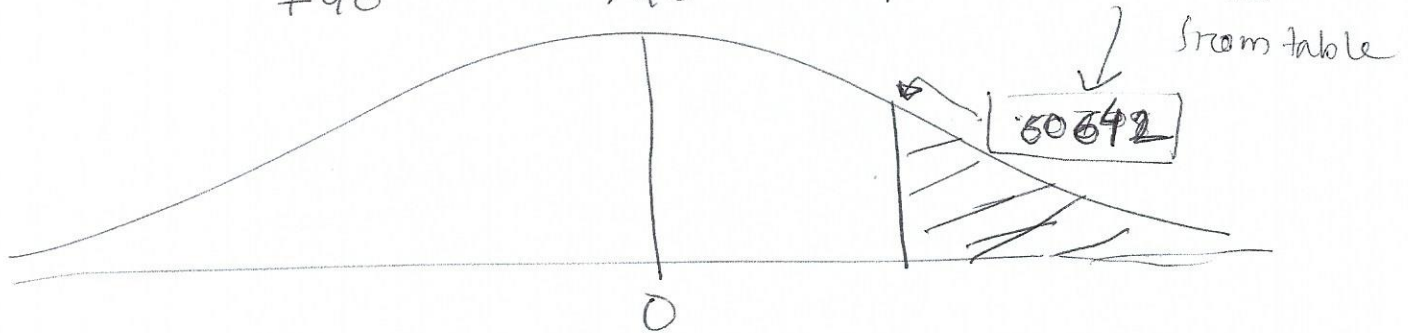
$$8.851\%$$

⑤7

2.

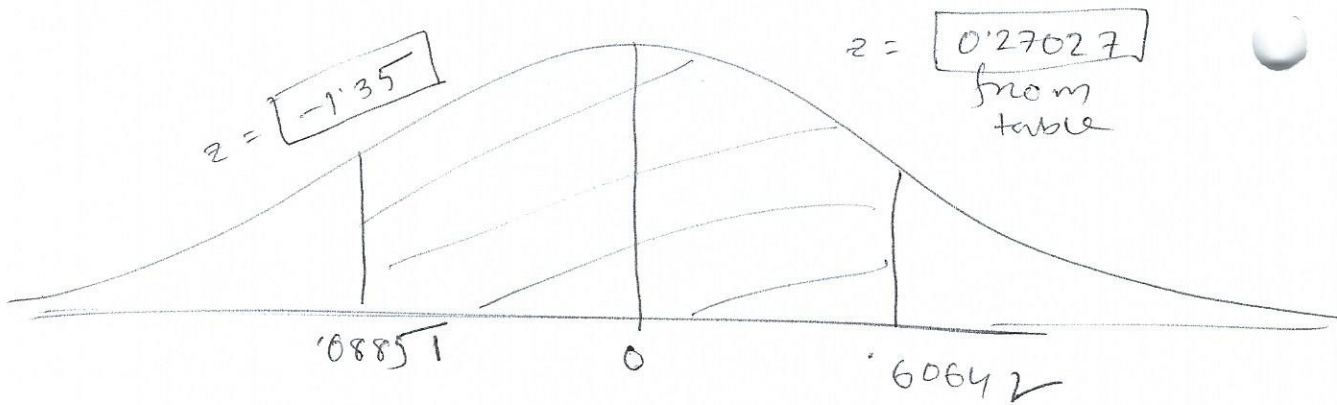


$$z = \frac{4700 - 4500}{740} = \frac{200}{740} = \frac{10}{37} = \boxed{0.27027}$$



$$(1 - 0.606) \% = 39.358 \% .$$

3.

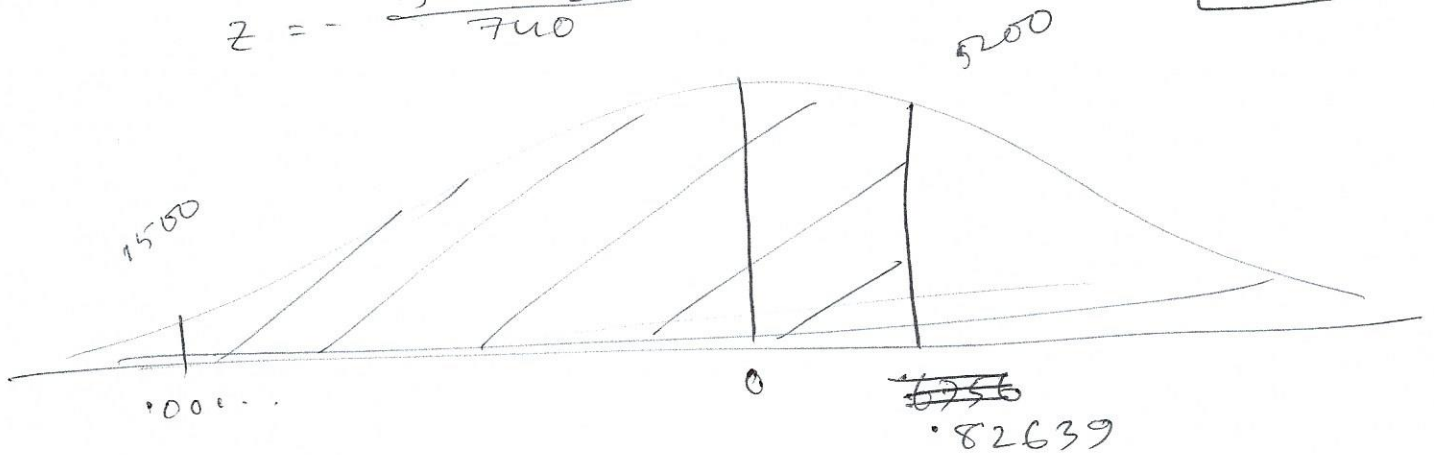


$$(.60642 - .08851) \% = 51.79 \%$$

$$4. z = \frac{5200 - 4500}{740} = \frac{700}{740} = 0.9459 \text{ from } z$$

$$z = -\frac{1500 - 4500}{740} = \frac{3000}{740} = 4.0541$$

0.82639



~~0.0001~~ 82.639%

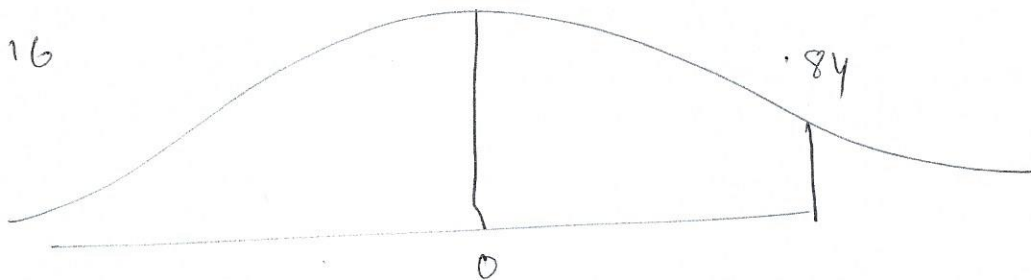
5.

$$\mu - 3\sigma < x < \mu + 3\sigma$$

$$4500 - 2220 < x < 4500 + 2220$$

$$2280 < x < 6720$$

6. 0.16



$$0.99 = \frac{x - 4500}{740}$$

$$x = 5232.6$$

60