

Name _____

Basics of Normal Curve 1-8-19 $Z = \frac{x - \bar{x}}{s}$ where \bar{x} = mean of sample and s = sample standard deviation

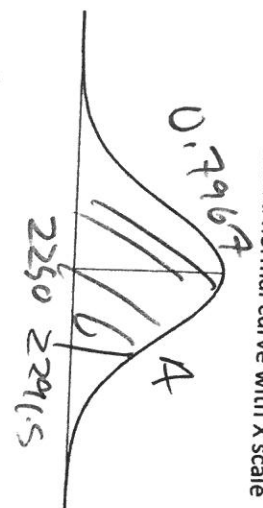


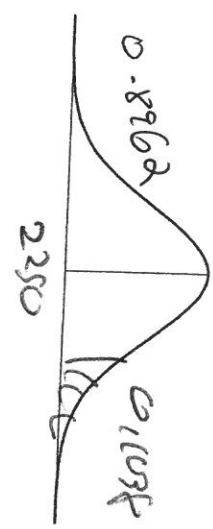
<p>1. Given a mean of 2250 and standard deviation of 50 Determine $P(x \leq 2205)$</p> <p>USING CHART Related z score and probability $Z = -0.9$ $P(x \leq 2205) = 0.1841$</p>	<p>2. Given a mean of 2250 and standard deviation of 50 Determine $P(x \leq 2305)$</p> <p>USING CHART Related z score and probability $Z = 1.1$ $P(x \leq 2305) = 0.8643$</p>
<p>3. Given a mean of 2250 and standard deviation of 50 Determine $P(x \geq 2195)$</p> <p>USING CHART Related z score and probability $Z = -1.1$ $P(x \geq 2195) = 0.8643$</p>	<p>4. Given a mean of 2250 and standard deviation of 50 Determine $P(x \geq 2345)$</p> <p>USING CHART Related z score and probability $Z = 1.9$ $P(x \geq 2345) = 0.0287$</p>

5. Explain the process of answering #1 and #2

6. Explain the process of answering #3 and #4

7. What is the difference in process from 1 & 2 to 3 & 4?

$$Z = \frac{x - \text{mean}}{SD} \quad X = Z(SD) + \text{mean}$$

<p>8. Given a mean of 2250 and standard deviation of 50 GIVEN $P(X \leq A) = 0.7967$</p> <p>USING CHART Determine related z score and x score</p> <p>$Z = \underline{0.83}$ $A = \underline{2291.5}$</p> <p>Sketch the related normal curve with X scale</p> 	<p>9. Given a mean of 2250 and standard deviation of 50 Determine $P(X \leq B) = 0.2236$</p> <p>USING CHART Determine related z score and x score</p> <p>$Z = \underline{-0.76}$ $B = \underline{2212}$</p> <p>Sketch the related normal curve with X scale</p> 
<p>10. Given a mean of 2250 and standard deviation of 50 Given $P(X \geq C) = 0.9960$</p> <p>USING CHART Related z score and probability</p> <p>$Z = \underline{-2.65}$ $C = \underline{217.5}$</p> <p>Sketch the related normal curve with X scale</p> 	<p>11. Given a mean of 2250 and standard deviation of 50 Given $P(X \geq D) = 0.1038$</p> <p>USING CHART Related z score and probability</p> <p>$Z = \underline{1.26}$ $D = \underline{2313}$</p> <p>Sketch the related normal curve with X scale</p> 

12. Explain the process of answering #8 and #9

13. Explain the process of answering #10 and #11

14. What is the difference in process from 8 & 9 to 10 & 11?