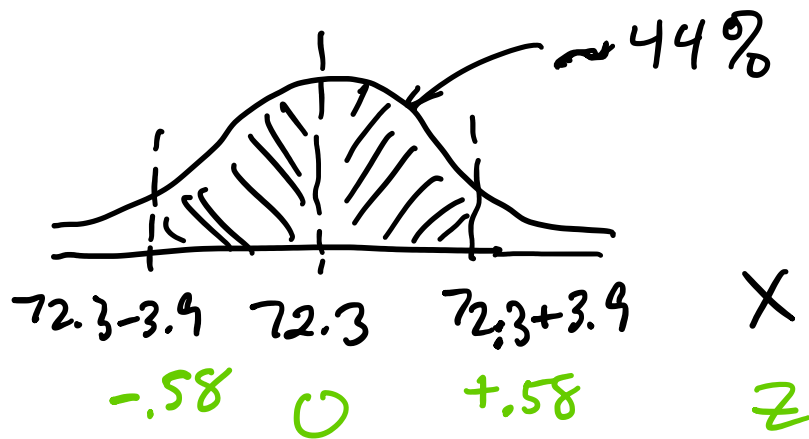


Normal Curve Sample Solutions

Monday, February 27, 2023 2:32 PM

1.

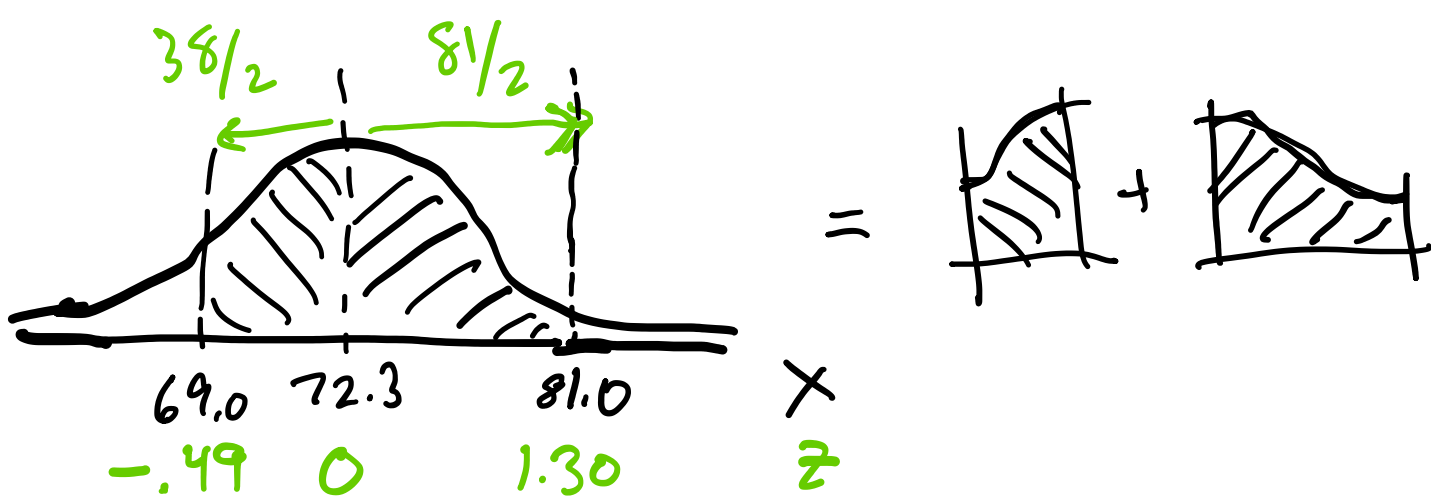


$$z = \frac{3.9}{6.7} \approx 0.58$$

z	Area
.58	~44%

Ans: ~44%

2.



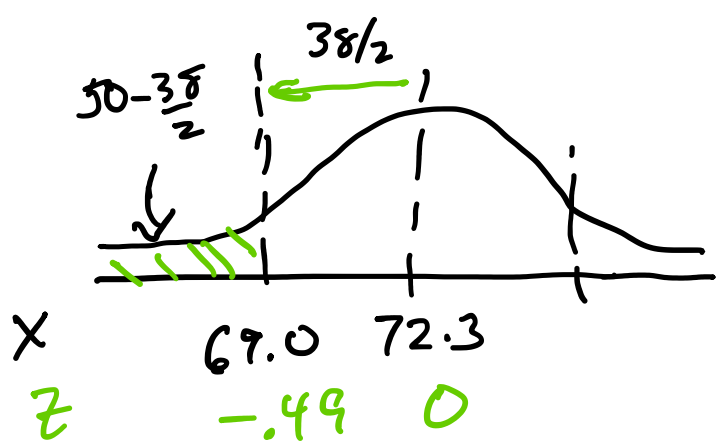
$$z_L = \frac{69.0 - 72.3}{6.7} \approx -0.49$$

$$z_R = \frac{81.0 - 72.3}{6.7} \approx 1.30$$

z	Area
.49	~38%
1.30	~81%

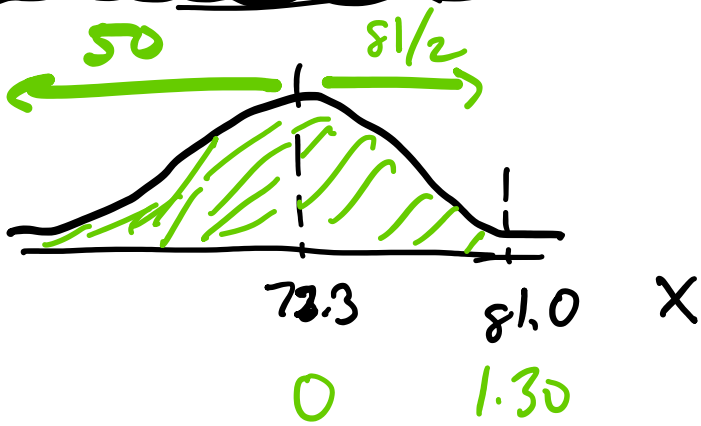
$$\text{Ans: } \frac{38}{2} + \frac{81}{2} \approx 60\%$$

3.



percentile rank for $X = 69.0$

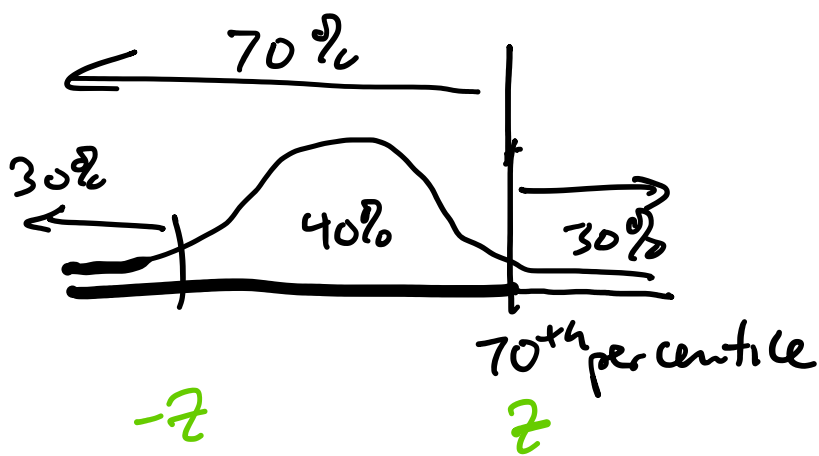
$$\text{Ans: } 50 - \frac{38}{2} \quad \text{or} \quad \frac{100 - 38}{2} \approx 31\%$$



percentile rank for $X = 81.0$

$$\text{Ans: } 50 + \frac{81}{2} \approx 90\%$$

4.

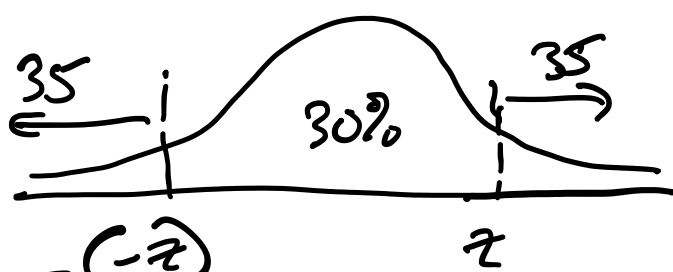


z	Area
.52	40%

$$z \approx 0.52$$

$$X = (0.52) \cdot 6.7 + 72.3 \approx 75.8$$

has 70th percentile rank



z	Area
.39	30%

we want -0.39 for a z value

$$S. \quad X = (-0.39)(6.7) + 72.3 \approx 69.7$$

has 35th percentile rank