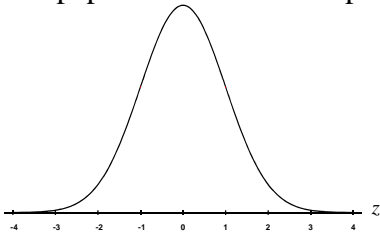


Math 164 (Spring 2008) **Homework #10 (Due Monday, April 7)** Name: _____

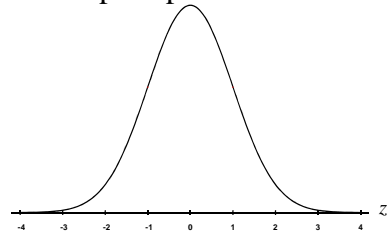
Find the quantity, make sure to shade the relevant area under the graph of the standard normal distribution, and mark the Z score(s) of the boundary (boundaries). Please do the graphing and show the final answers on this assignment sheet, and attach separate pieces of paper for detailed computation that doesn't fit the space provided.

1.



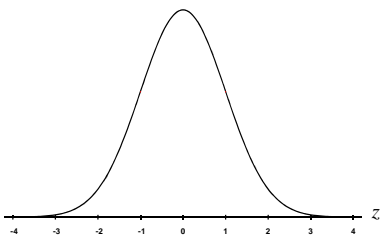
$$P(Z \leq 1.68)$$

5.



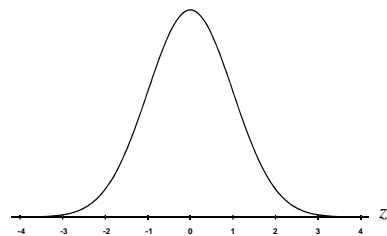
$$P(0.74 \leq Z \leq 1.88)$$

2.



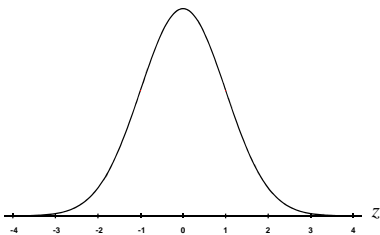
$$P(Z \leq -1.93)$$

6.



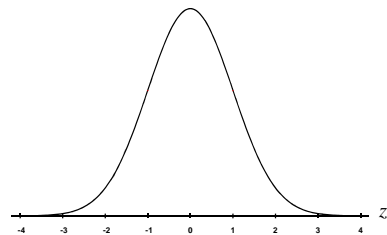
$$P(-1.67 < Z < 0)$$

3.



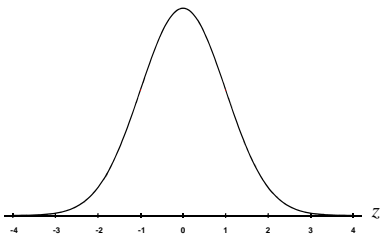
$$P(Z \geq 0.35)$$

7.



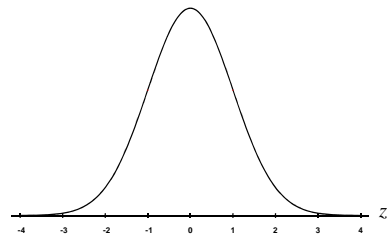
$$P(-1.54 \leq Z \leq -0.23)$$

4.



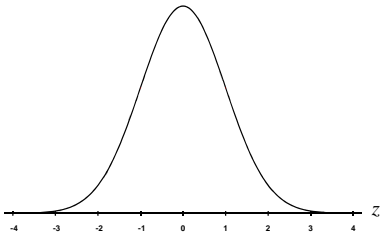
$$P(Z > -2.08)$$

8.



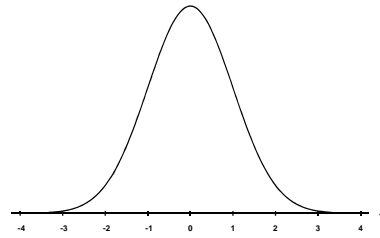
$$P(-1.03 \leq Z \leq 2.15)$$

9.



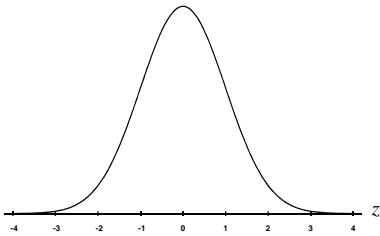
$P(Z \leq -1.50 \text{ OR } Z \geq 1.50)$

13.



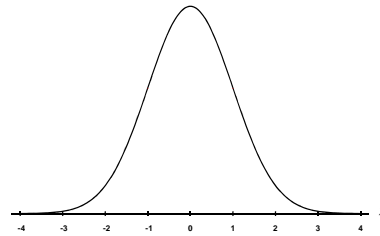
Find $z_{0.045}$.

10.



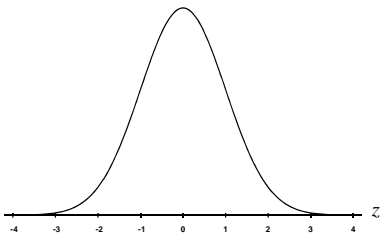
Find and mark the Z score so that the area to the left of it is 0.0238.

14.



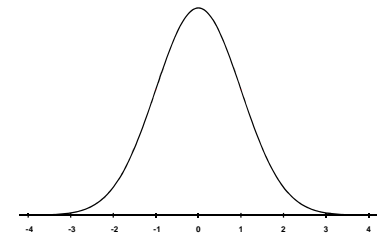
X normal with $\mu = 231$, $\sigma = 14$
Find $P(200 \leq X \leq 240)$

11.



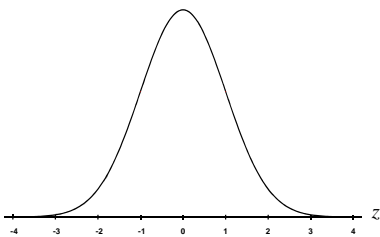
Find and mark the Z score so that the area to the left of it is 0.9320.

15.



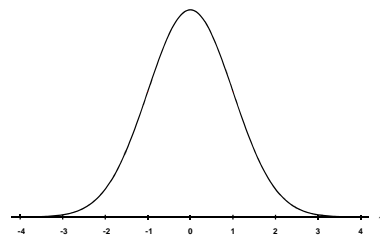
X normal with $\mu = 231$, $\sigma = 14$
Find the 76th percentile of X .

12.



Find and mark the Z score so that the area to the right of it is 0.0114.

16.



X normal with $\mu = 231$, $\sigma = 14$
Find the bottom of the top 15%.