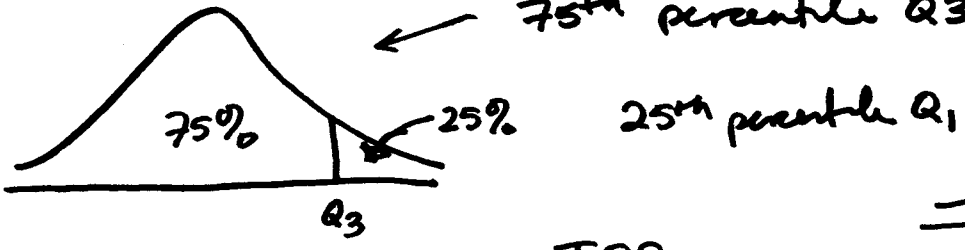
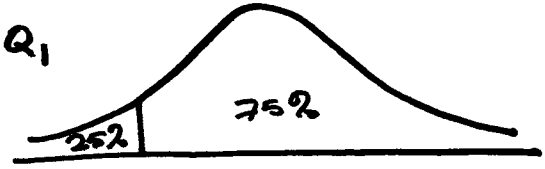
2. What is the inter-quartile range for this distribution? Calculate it using the information given in problem #1. Extrapolate between the Z scores if an exact Z score is not present in the table. (10 points max) Please print the value of the IQR (i.e. the result) on the answer sheet on the last page.

COMPUTER VERSION GREEN FORM AND ORANGE FORM





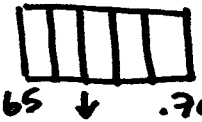
IQR

value of $Q_3 - Q_1$ value of

1) draw a picture

want the z where nearest to 50% in the middle so $z = .65$ and $z = .70$ are the closest and by symmetry $z = -.65$ and $z = -.70$. Areas $z_{.65} = 48.43$ $z_{.70} = 51.61$ > difference = 3.18 divide by 2 = 1.59 divide by 5 = .318

2) Exact z is .67 by extrapolating →



.67 is closest to 50%

3) solve for the original price

$$.67 = \frac{X_{Jack} - 2200}{200} \qquad X_{Jack} = 2334$$

$$-.67 = \frac{X_{Jill} - 2200}{200} \qquad X_{Jill} = 2066$$

4) IQR is

$2334 - 2006 = 268$