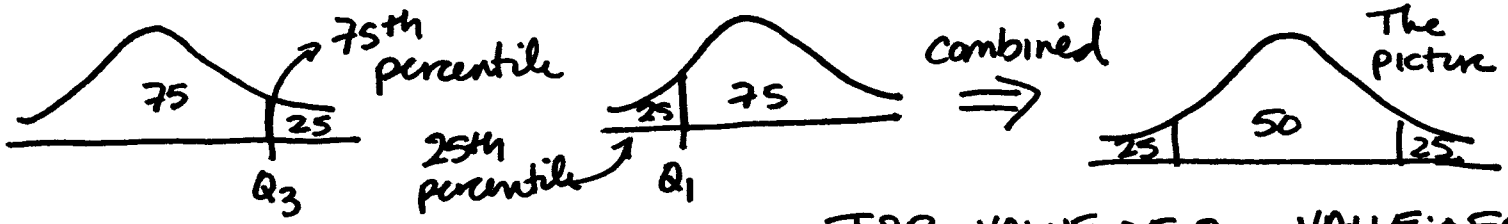
PINK #4 or PURPLE

E. About 80%

5. What is the inter-quartile range for this distribution? Calculate it using the information given in problem #4. 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. PINK #4 OR PURPLE #5



IQR = VALUE OF Q_3 − VALUE OF Q_1

1) WANT THE Z CLOSEST TO THE PICTURE ↗ SOMETHING W/ 50% IN THE MIDDLE $z = .65$ OR $z = .70$. By symmetry Q_1 must be $z = -.65$ or $z = -.70$. From the table $z_{.65} = 48.43$ > difference is 3.18%
$z_{.70} = 51.61$

2) EXTRAPOLATE TO FIND THE EXACT Z

divide 3.18 by 2 = 1.59 (for one tail)
divide 1.59 by 5 = .318 (for each slice) exact z = .67 for Q_3 and −.67 for Q_1

3) SOLVE FOR THE ORIGINAL SCORES

$z_{Q_3} = .67 = \frac{X - 150}{10}$ $Q_3 = 156.7$

$z_{Q_1} = -.67 = \frac{X - 150}{10}$ $Q_1 = 143.3$

4) IQR = 156.7 − 143.3 = 13.4

also accept 14 (since LSAT is whole #s)