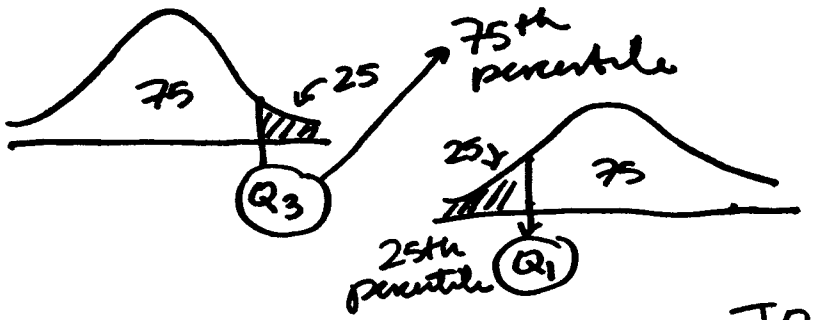
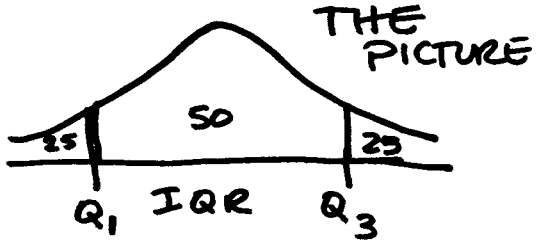
D. About 50%
E. ~~About 73%~~

(BLUE)

4 or (Yellow) 7. 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. BLUE FORM OR YELLOW FORM SAT TEST



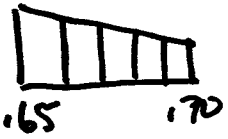
combined ⇒



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 $z = -.67$ and $z = -.70$. From table areas are $z.65 = 48.43$, $z.70 = 51.61$ > difference is 3.18%

2) EXTRAPOLATE TO FIND THE EXACT Z



divide 3.18 by 2 (for one tail) and then by 5 (for slices) exact will be $z = .67$

3) SOLVE FOR THE ORIGINAL SCORE

$z_{Q_3} = .67 = \frac{X_{JACK} - 500}{100}$ $X_{JACK} = 567$

$z_{Q_1} = -.67 = \frac{X_{JILL} - 500}{100}$ $X_{JILL} = 433$

4) IQR IS $567 - 433 = 134$