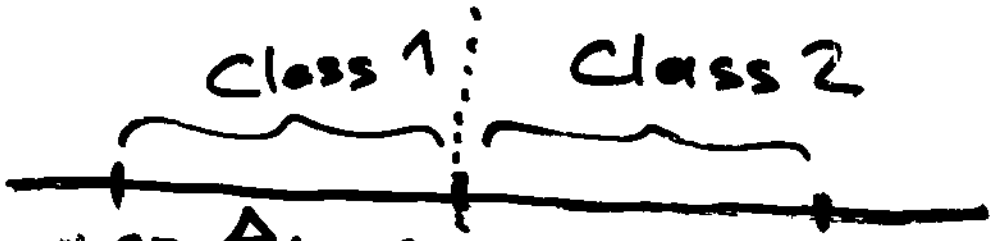
$\Delta = 1.6932$ $\Delta = 1.695$ (1)

$\Delta_r = 1.69$ $\Delta_r = 1.70$

Calculating the class limits and the bounderies for the 1st and the 2nd subgroup.

$X_{(1)} = 2.97$

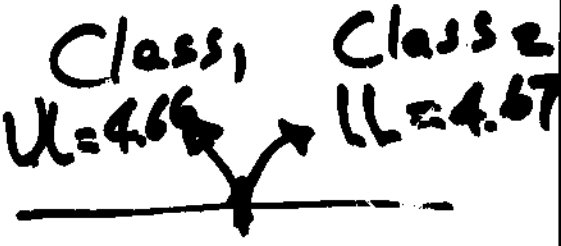


1.70

6.37

4.67

Lower class Limit for class 2 $= 4.67$, $UCL_1 = 4.66$



$Lb_{Class_2} = 4.665$

$Ub_{Class_1} = 4.665$

$X_{(1)} = 2.97 = LCL_1$

$\Delta = 1.70$

$LCL_2 = 2.97 + 1.70 = 4.67$

$UCL_1 = 4.66$

$UC_{Boundary_1} = LC_{Boundary_2} = \frac{4.67 + 4.66}{2}$

$UCB_1 = 4.665$

For class 2
Calculate density:

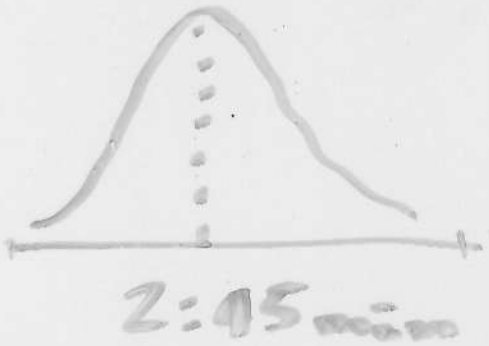
$$D_2 = \frac{Rf_2}{A_2} = \frac{0.0556}{1.70}$$

Travelers going from Auburn to Birmingham

Type 1

Auburn
Montgomery
Birmingham

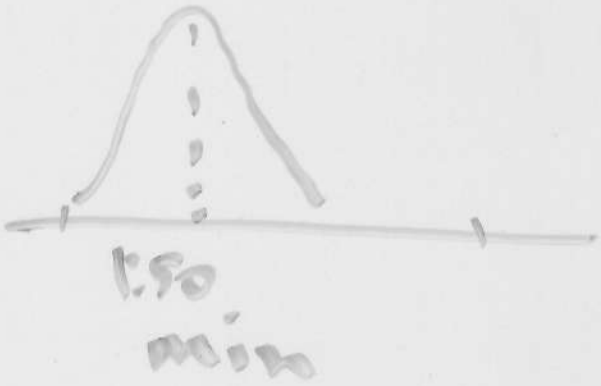
2.5 - 3 hrs

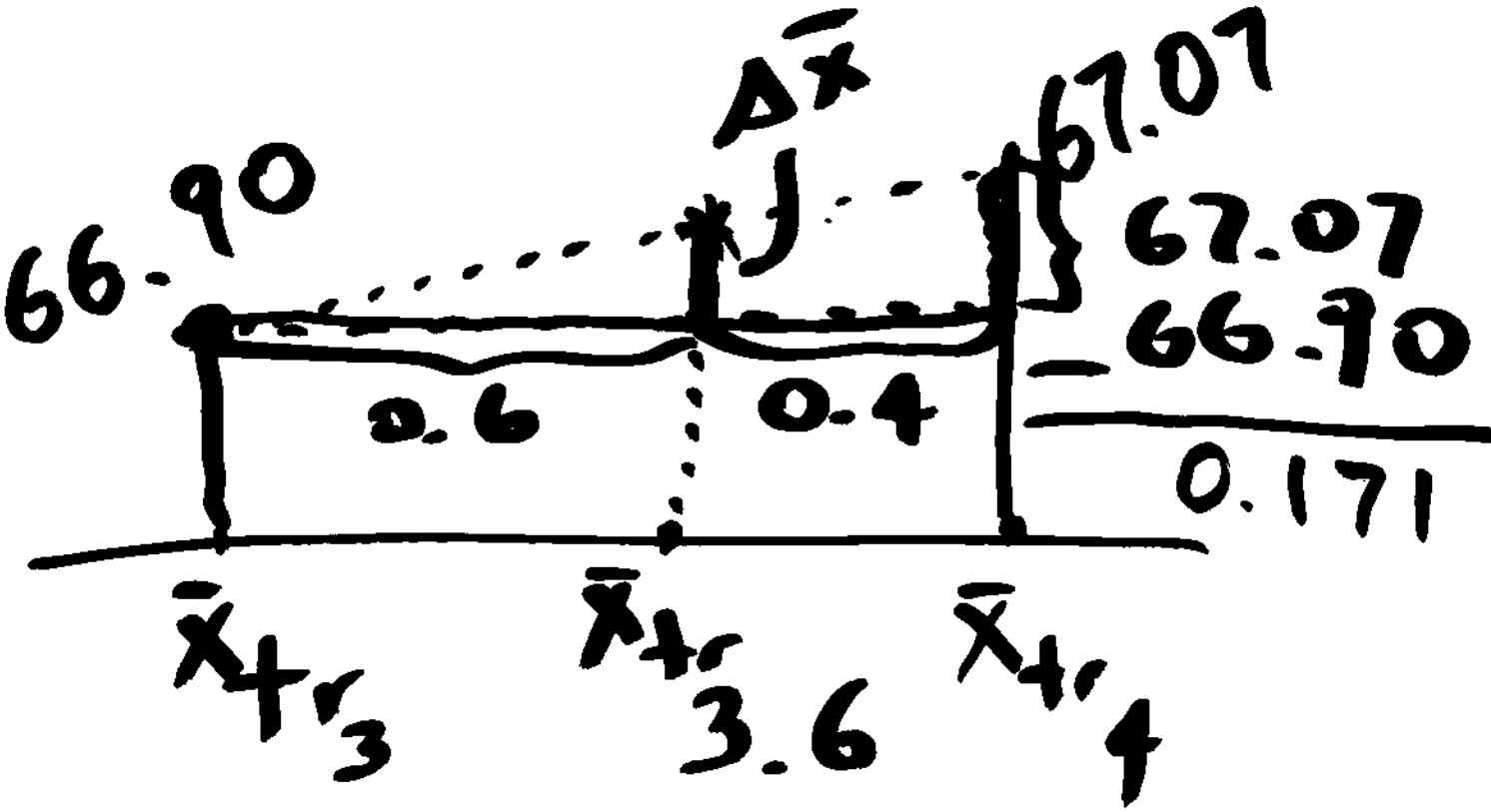


Type 2

Auburn
Birmingham

1:45 min - 2:00 min





$$\frac{\Delta\bar{x}}{0.171} = \frac{0.6}{1}$$

$$\Delta\bar{x} = (0.6)(0.171)$$