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R Markdown

$$\hat{y} = b_0 + b_1 x$$

PROBLEM 1 :

Using the purity data from Problem 2.7, calculate the estimates for the true slopes and true intercept using RMarkdown

```
## [1] 0.0329736
```

```
## [1] -1.84507
```

PROBLEM 2:

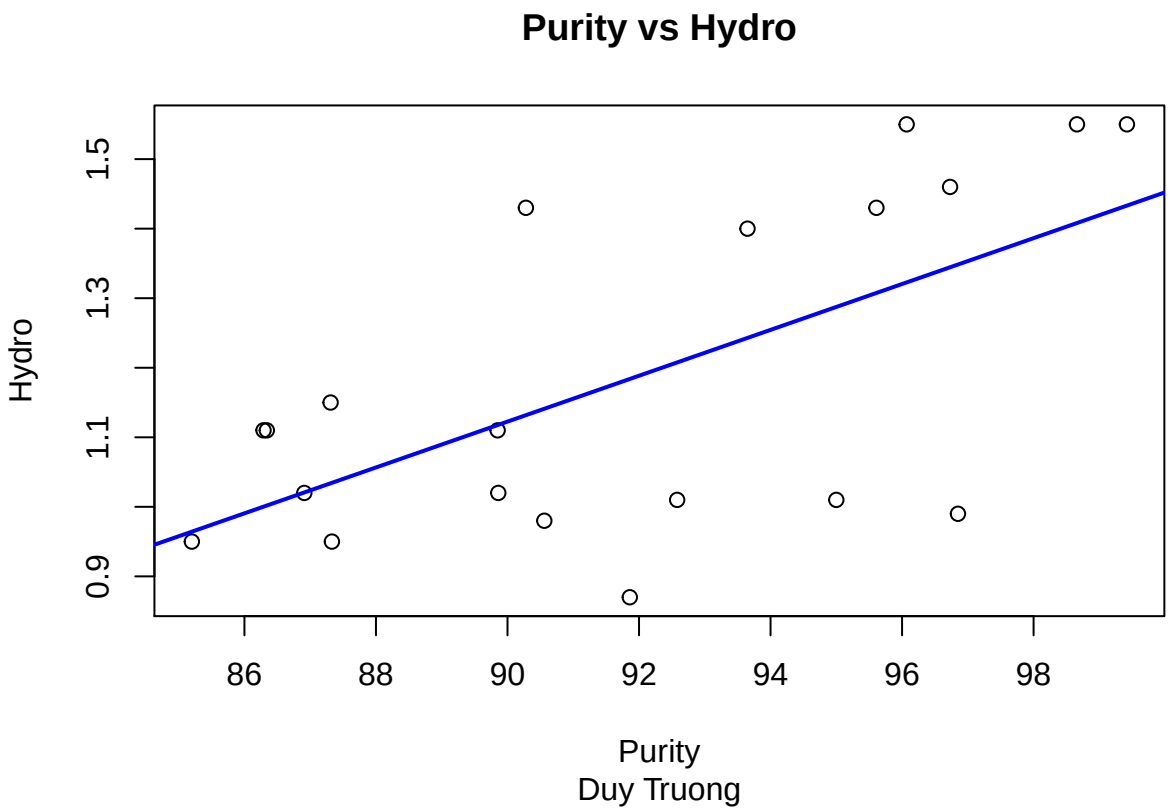
Calculate the estimate of the true error variance. Interpret

```
## [1] 0.03614274
```

The smaller our MSres is the more reliable our data is since there is less variability

PROBLEM 3:

Plot the data and the fitted simple linear regression line in one graph



PROBLEM 4:

Verify (using R) Properties 1,2,4 and 5 of the least squares fit

```
## [1] -1.665335e-15
```

```
##     P1   P2           P4           P5
## 1 TRUE TRUE 1.926237e-13 9.550303e-15
```

HOMEWORK 2:

```
## [1] 3.386119
```

```
## [1] 0.003291122
```

```
## [1] 11.4658
```

```
## [1] 0.003291122
```

```
## Analysis of Variance Table
##
## Response: yi
##           Df  Sum Sq Mean Sq F value   Pr(>F)
## xi         1 0.41441 0.41441  11.466 0.003291 **
## Residuals 18 0.65057 0.03614
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```