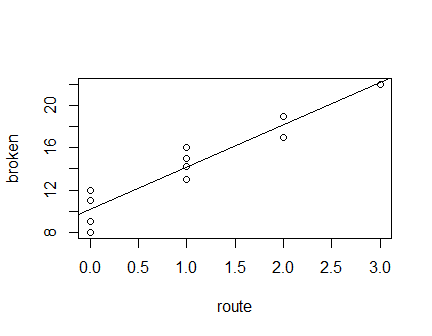
Chapter 1 Problem 21 Michael Streyle

##   
## Call:  
## lm(formula = broken ~ route)  
##   
## Coefficients:  
## (Intercept) route   
## 10.2 4.0

## (Intercept)   
## 14.2

## (Intercept)   
## 18.2

## (Intercept)   
## 4



The intercept is 10.2 broken ampules and the slope is 4 broken ampules per route.

Written Answers to Question 21

1. The estimated regression function is Ŷ = 10.2 + 4(X). The linear regression line does seem to give a good fit here – the line follows the data very well.
2. The point estimate of the expected number of broken ampules when X = 1 is 14.2.
3. When there are two transfers made, the expected number of broken ampules is 18.2 so the difference between one transfer and two transfers is 4.0.
4. By plotting the point () on the plot of the data and best fit line, it shows the point is on the fitted regression line. See below in red.

