Handout 12: Interpret a slope and intercept from a multivariate regression model

```
round(summary(lm(TomatoMeter~I(Year-2001)+I(Runtime-90)+I(BoxOffice-45), data=movies))$coef,3)
```

```
##                   Estimate Std. Error t value Pr(>|t|)
## (Intercept)         40.846      1.095  37.305    0.000
## I(Year - 2001)       0.318      0.135   2.358    0.018
## I(Runtime - 90)      0.324      0.032  10.227    0.000
## I(BoxOffice - 45)    0.059      0.008   7.349    0.000
```

Interpret the slope on year in a single sentence:

The model predicts that, when comparing movies of the same runtime and box office returns, a movie produced one year later has 0.32% higher percent of positive reviews, on average.

Interpret the slope on runtime in a single sentence:

The model predicts that, holding constant year of release and box office returns, a one minute increase in movie runtime is associated with a 0.32% higher percent of positive reviews, on average.

Interpret the intercept in a single sentence:

The model predicts that a 90-minute movie released in 2001 that made 45 million in box office returns would get 40.8% positive reviews, on average.

Name (Print and Sign): _____