

## A2-Q3

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1.

```
library(astsa)
fit<- lm(soi~time(soi))
summary(fit)
```

```
##
## Call:
## lm(formula = soi ~ time(soi))
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.04140 -0.24183  0.01935  0.27727  0.83866
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  13.70367    3.18873   4.298 2.12e-05 ***
## time(soi)    -0.00692    0.00162  -4.272 2.36e-05 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.3756 on 451 degrees of freedom
## Multiple R-squared:  0.0389, Adjusted R-squared:  0.03677
## F-statistic: 18.25 on 1 and 451 DF,  p-value: 2.359e-05
```

According to the result, the p-value is less than 0.05, so there is a significant trend in the sea surface temperature.