

## 1. Problem

Consider the following regression results:

Call:

```
lm(formula = y ~ x, data = d)
```

Residuals:

Min	1Q	Median	3Q	Max
-2.14867	-0.82868	-0.07472	0.66596	2.54119

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.0001676	0.1254992	0.001	0.999
x	1.2492437	0.1241613	10.061	2.04e-14 ***

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.9786 on 59 degrees of freedom

Multiple R-squared: 0.6318, Adjusted R-squared: 0.6255

F-statistic: 101.2 on 1 and 59 DF, p-value: 2.043e-14

Describe how the response  $y$  depends on the regressor  $x$ .

## Solution

The presented results describe a linear regression.

The mean of the response  $y$  increases with increasing  $x$ .

If  $x$  increases by 1 unit then a change of  $y$  by about 1.25 units can be expected.

Also, the effect of  $x$  is significant at the 5 percent level.