

Assignment 1

$$34 \cdot \frac{b}{d} \quad 34 \quad 34 \quad 9^b$$

$$\frac{34}{b} \cdot \frac{b}{d} >$$

$$\frac{34}{b} > \frac{b}{d}$$

$$\frac{34}{b} > \frac{b}{d} \quad \frac{b}{d} > \frac{34}{b}$$

$$\frac{34}{b} > 9^b$$

Assignment 2

From the information given, it follows that the case is binomial with $n = 1000$ and $p = 0.015$

$$34 \cdot \frac{b}{d} > \frac{b}{d} \quad \text{So the company should expect to pay out 15 million DKK}$$

$$\frac{34}{b} > \frac{b}{d} \quad \frac{b}{d} > \frac{34}{b}$$

So there is a 43% chance that the company will need more than 15 million

$$\frac{34}{b} > \frac{b}{d} \quad \frac{b}{d} > \frac{34}{b}$$

So, they would need to reserve a minimum of 22 million DKK, if they are to be 95% certain of having enough money

Assignment 3

$$\frac{34}{b} > \frac{b}{d} \quad \frac{34}{b} > \frac{b}{d} \quad \frac{34}{b} > \frac{b}{d}$$

$$P(A | D) = \frac{p_{pq}}{p_{qi}} \cdot \frac{b}{d}$$

$$\frac{34}{b} > \frac{b}{d}$$

$$P(D | A) = \frac{P(A \cap D)}{P(A)}$$

$$P(A | - D) = \frac{P(A \cap - D)}{P(- D)}$$

Assignment 4

Evidence				Assumptions	
	Sample1	Sample2		Populations Normal	
Size	12	12	n	H ₀ : Population Variances Equal	
Mean	37900	39800	x-bar	F ratio	1.33833
Std. Deviation	5100	5900	s	p-value	0.6372

Assuming Population Variances are Equal			
Pooled Variance	3E+07	s ² _p	
Test Statistic	-0.8440	t	
df	22		

At an α of				Confidence Interval for difference in Population Means	
Null Hypothesis	p-value	5%	1 - α	Confidence Interval	
H ₀ : μ ₁ - μ ₂ = 0	0.4078		95%	-1900 ± 4668.9	= [-6568.9 , 2768.9]
H ₀ : μ ₁ - μ ₂ ≥ 0	0.2039				
H ₀ : μ ₁ - μ ₂ ≤ 0	0.7961				

There is not sufficient evidence to support the claim that the two tries differ significantly

Assignment 5

Evidence				Assumption	
	Sample 1	Sample 2		Large Samples	
Size	200	150	n		
#Successes	20	10	x		
Proportion	0.1000	0.0667	p-hat		

Hypothesis Testing			
Hypothesized Difference Zero			
Pooled p-hat	0.0857		
Test Statistic	1.1024	z	

At an α of			
Null Hypothesis	p-value	5%	
H ₀ : p ₁ - p ₂ = 0	0.2703		
H ₀ : p ₁ - p ₂ ≥ 0	0.8649		
H ₀ : p ₁ - p ₂ ≤ 0	0.1351		

Since p-value = 0.1351 we do not have evidence to support the claim that breast cancer is more prevalent in the urban community

Assignment 6

Confidence Interval for Slope

$1-\alpha$	(1- α) C.I. for β_1
95%	-0.6861 + or - 0.55683

Confidence Interval for Intercept

$1-\alpha$	(1- α) C.I. for β_0
95%	42.5818 + or - 14.4975

Prediction Interval for Y

$1-\alpha$	X	(1- α) C.I. for Y given X
95%	30	21.9995 + or - 4.41628
		17.5832 26.4157

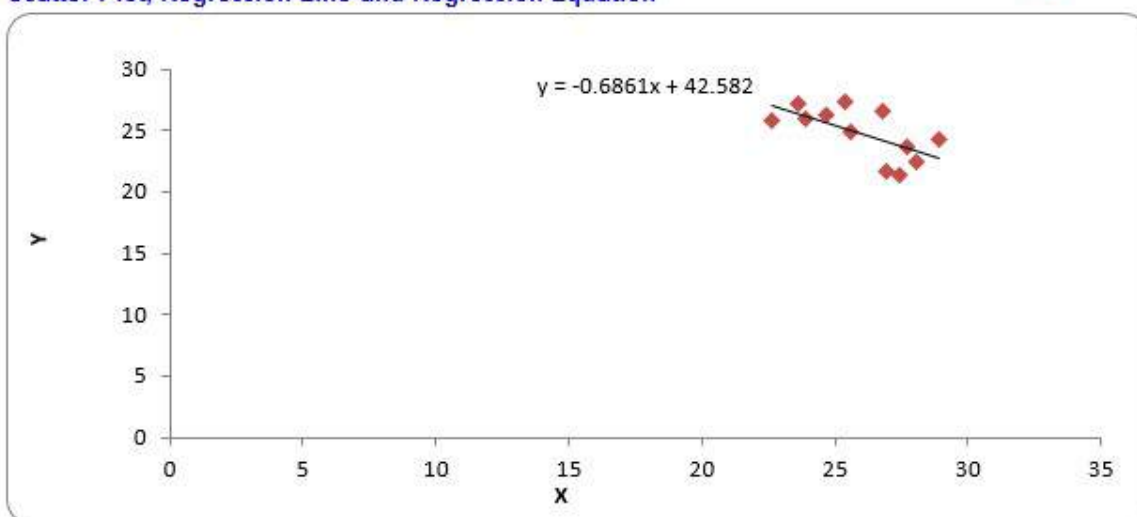
r^2	0.4298	Coefficient of Determination
r	-0.6556	Coefficient of Correlation

$s(b_1)$	0.249908713	Standard Error of Slope
t	-2.745310948	
p-value	#NUM!	

$s(b_0)$	6.50653544	Standard Error of Intercept
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s	1.83965003	Standard Error of prediction
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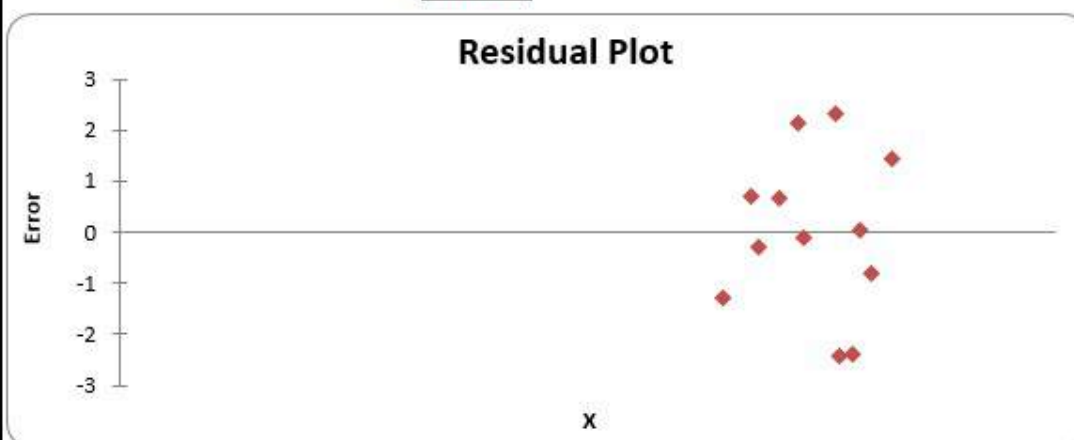
Scatter Plot, Regression Line and Regression Equation



Residual Analysis

Durbin-Watson statistic

d 0.36747



Normal Probability Plot of Residuals

