

## DM-Quiz-2020-Q2

52.94% (9/17)

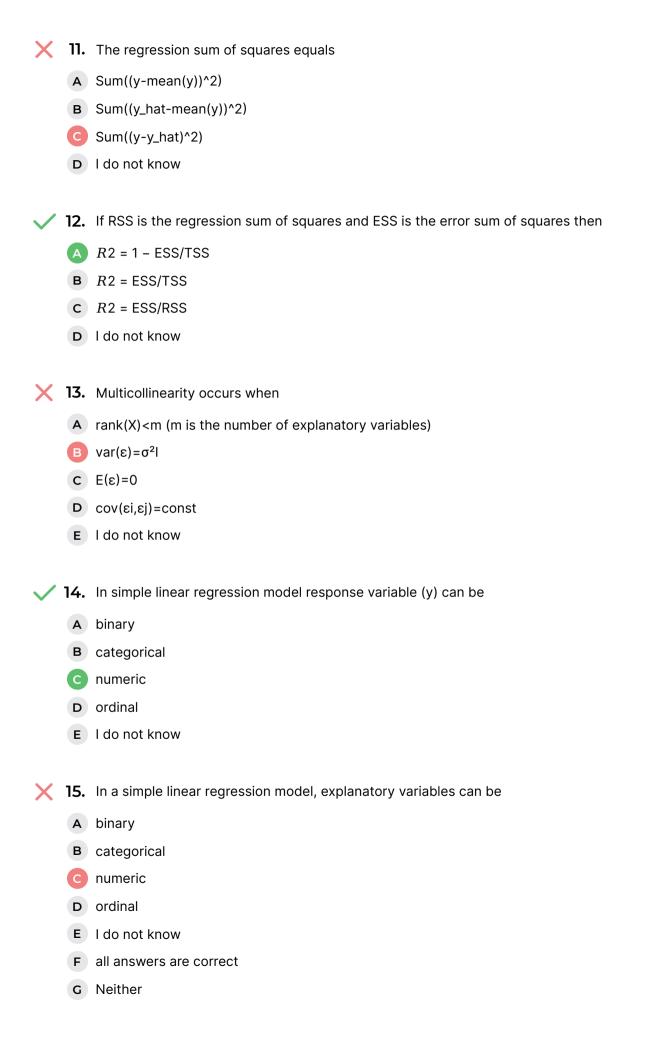
- **1.** Select the intercept-only models, if any:
  - A y = b0 + b1\*x
  - **B** y=b0+b1\*x1+b2\*x2
  - $C \ln(y) = b0$
  - **D**  $y=e^{(b1*x)}$
  - E I do not know
- **2.** The interpretation of adjusted R^2 for multiple linear regression is the same as the interpretation of R^2 for simple linear regression.
  - **A** True
  - B False
  - C I do not know
- **3.** Which one is observable ("visible")?
  - A e (residuals)
  - **B** ε (regression error)
  - **c** neither
  - **D** I do not know
- $\times$  4. The estimation of β is distributed as:
  - A b~N(0,  $\sigma^2$ )
  - B  $b \sim N(β, σ<sup>2</sup>)$
  - c  $b \sim N(\beta, \sigma^2(X^TX)^{-1})$
  - **D** It does not have distribution
  - E I do not know

<b>/</b>	5.	How many parameters are estimated by OLS in the case of simple linear regression?
	Α	1
	В	2
	C	3
	D	I do not know
X	6.	Estimation of e (residuals) is distributed as:
	A	$e \sim N(0, \sigma^2)$
	В	$e\sim N(0, \sigma^2 M)$ (M is a matrix)
	C	It does not have distibution
	D	I do not know
<b>/</b>	7.	b parameters can be computed using only
	Α	OLS
	В	ML
	C	Neither
	D	I do not know
<b>/</b>	8.	In the case of multiple linear regression
	A	adj R^2 < 1 (always)
	В	adj R^2 <= 1 (always)
	C	I do not know
<b>/</b>	9.	b=
	A	$(X'X)^{-1}X'Y$
	В	$(X'X)^{-1}Y'X$
	C	$(Y'X)^{-1}Y'X$
	D	I do not know
<b>/</b>	10.	The total sum of squares equals
	A	Sum((y-mean(y))^2)

B Sum((y\_hat-mean(y))^2)

C Sum((y-y\_hat)^2)

**D** I do not know



X	16.	If A is a matrix, X is the vector of random variables, then var(AX)=
	Α	A'var(X)A
	В	A^2var(X)
	C	var(x)
	D	Can not be calculated
	E	I do not know
X	17.	Which of the answers can be used to conclude about the significance of variables (if any)?
	A	t values
	В	Estimated coefficients (only)
	C	SE of estimated coefficients (only)
	D	I do not know