Feedback — Week 1 Quiz

Help Center

Thank you. Your submission for this quiz was received.

You submitted this quiz on **Mon 11 May 2015 1:40 AM SGT**. You got a score of **10.00** out of **10.00**.

Question 1

Suppose I conduct a study and publish my findings. Which of the following is an example of a replication of my study?

Your Answer		Score	Explanation
◉ An investigator at another institution conducts a study addressing the same question, collects her own data, analyzes it separately from me, and publishes her own findings.	✔	1.00	
○ I take my own data, analyze it again, and publish new findings.			
○ I give my data to an independent investigator at another institution, she analyzes the data and gets the same results as I originally obtained.			
○ An investigator at another institution conducts a study addressing a different scientific question and publishes her findings.			
Total		1.00 / 1.00	

Question 2

Which of the following is a requirement for a published data analysis to be reproducible?

Your Answer		Score	Explanation
◉ The investigator makes the analytic data publicly available.	✔	1.00	

The data analysis is conducted using R.		
The analysis is conducted on a variant of the Unix operating system.		
The investigator's final publication is made available free of charge.		
Total		1.00 / 1.00

Question 3

Which of the following is an example of a reproducible study?

Your Answer		Score	Explanation
The study's analytic data and computer code for the data analysis are publicly available. When the code is run on the analytic data, the findings are identical to the published results.	✔	1.00	
The study's analytic data and computer code are not publicly available, but the study was simple enough to be repeated by an independent investigator.			
The study's analytic data are publicly available, but the computer code is not.			
The study's original authors re-run their computer code on their analytic data and confirm publicly that the findings match those of the published results.			
Total		1.00 / 1.00	

Question 4

Which of the following is a reason that a study might NOT be fully **replicated**?

Your Answer		Score	Explanation
The original study was opportunistic in its timing and it would be difficult to find a similar context in which to repeat it.	✔	1.00	

○ The original study had null findings.		
○ The original study was conducted by a well-known investigator.		
○ The original study was published in a high impact journal and is considered authoritative.		
Total		1.00 / 1.00

Question 5

Which of the following is a reason why publishing **reproducible research** is increasingly important?

Your Answer		Score	Explanation
◉ New technologies are increasing the rate of data collection, creating datasets that are more complex and extremely high dimensional.	✔	1.00	
○ Most studies today are small-scale and easily replicated.			
○ The statistical methods for most studies can be accurately described using plain language.			
○ Computing power is limited today, making it difficult to apply sophisticated statistical methods.			
Total		1.00 / 1.00	

Question 6

What is the role of *processing code* in the research pipeline?

Your Answer		Score	Explanation
○ It conducts the statistical analysis of the primary outcome.			
○ It transforms the analytic data into computational results.			
◉ It transforms the measured data into analytic data.	✔	1.00	

○ It transforms the computational results into figures and tables.		
Total		1.00 / 1.00

Question 7

Which is a goal of literate statistical programming?

Your Answer		Score	Explanation
○ Require that data analysis summaries are always written in LaTeX.			
○ Separate figures and tables from other data analytic summaries.			
◉ Combine explanatory text and data analysis code in a single document.	✔	1.00	
○ Ensure that data analysis documents are always exported in PDF format.			
Total		1.00 / 1.00	

Question 8

What does it mean to *weave* a literate statistical program?

Your Answer		Score	Explanation
○ Compress the literate program so that it takes up less space.			
◉ Transform the literate program into a human readable document.	✔	1.00	
○ Transform the literate program into a machine readable code file.			
○ Transform a literate program from R to python.			

Total	1.00 / 1.00

Question 9

Which of the following is required to implement a literate programming system?

Your Answer		Score	Explanation
A programming language like R.	✔	1.00	
A program that views PDF files.			
A web server for publishing documents.			
A cloud-based computing service for running computations.			
Total		1.00 / 1.00	

Question 10

What is one way in which the knitr system differs from Sweave?

Your Answer		Score	Explanation
knitr allows for the use of markdown instead of LaTeX.	✔	1.00	
knitr is written in python instead of R.			
knitr was developed by Friedrich Leisch.			
knitr lacks features like caching of code chunks.			
Total		1.00 / 1.00	