

Feedback – Week 2 Quiz

[Help](#)

You submitted this quiz on **Sat 19 Jul 2014 11:15 AM PDT**. You got a score of **10.00** out of **10.00**.

Question 1

Suppose I define the following function in R

```
cube <- function(x, n) {  
  x^3  
}
```

What is the result of running

```
cube(3)
```

in R after defining this function?

Your Answer**Score** **Explanation**

An error is returned because 'n' is not specified in the call to 'cube'

A warning is given with no value returned.

The user is prompted to specify the value of 'n'.

The number 27 is returned

✓ 1.00

Because 'n' is not evaluated, it is not needed even though it is a formal argument.

Total

1.00 /

1.00

Question 2

The following code will produce a warning in R.

```
x <- 1:10
if(x > 5) {
    x <- 0
}
```

Why?

Your Answer

Score

Explanation

You cannot set 'x' to be 0 because 'x' is a vector and 0 is a scalar.

There are no elements in 'x' that are greater than 5

'x' is a vector of length 10 and 'if' can only test a single logical statement. ✓ 1.00

The syntax of this R expression is incorrect.

The expression uses curly braces.

Total

1.00 /

1.00

Question 3

Consider the following function

```
f <- function(x) {
    g <- function(y) {
```

```
    y + z
}
z <- 4
x + g(x)
}
```

If I then run in R

```
z <- 10
f(3)
```

What value is returned?

Your Answer**Score****Explanation** 4 16 7 10

1.00

Total

1.00 / 1.00

Question 4

Consider the following expression:

```
x <- 5
y <- if(x < 3) {
  NA
} else {
  10
}
```

What is the value of 'y' after evaluating this expression?

Your Answer	Score	Explanation
<input type="radio"/> NA		
<input type="radio"/> 3		
<input type="radio"/> 5		
<input checked="" type="radio"/> 10	✓ 1.00	
Total	1.00 / 1.00	

Question 5

Consider the following R function

```
h <- function(x, y = NULL, d = 3L) {  
  z <- cbind(x, d)  
  if(!is.null(y))  
    z <- z + y  
  else  
    z <- z + f  
  g <- x + y / z  
  if(d == 3L)  
    return(g)  
  g <- g + 10  
  g  
}
```

Which symbol in the above function is a free variable?

Your Answer	Score	Explanation
<input checked="" type="radio"/> f	✓ 1.00	
<input type="radio"/> z		
<input type="radio"/> d		

L g

Total

1.00 / 1.00

Question 6

What is an environment in R?

Your Answer**Score****Explanation** an R package that only contains data a collection of symbol/value pairs

1.00

 a list whose elements are all functions a special type of function

Total

1.00 / 1.00

Question 7

The R language uses what type of scoping rule for resolving free variables?

Your Answer**Score****Explanation** compilation scoping global scoping lexical scoping

1.00

 dynamic scoping

Total	1.00 / 1.00
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Question 8

How are free variables in R functions resolved?

Your Answer	Score	Explanation
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- The values of free variables are searched for in the working directory
- The values of free variables are searched for in the global environment
- The values of free variables are searched for in the environment in which the function was defined
- The values of free variables are searched for in the environment in which the function was called

✓ 1.00

Total	1.00 /
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 1.00 | 1.00 |

Question 9

What is one of the consequences of the scoping rules used in R?

Your Answer	Score	Explanation
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- All objects must be stored in memory
- R objects cannot be larger than 100 MB
- Functions cannot be nested

- All objects can be stored on the disk

Total

1.00 / 1.00

Question 10

In R, what is the parent frame?

Your Answer	Score	Explanation
<input type="radio"/> It is always the global environment		
<input type="radio"/> It is the package search list		
<input type="radio"/> It is the environment in which a function was defined		
<input checked="" type="radio"/> It is the environment in which a function was called	✓ 1.00	
Total	1.00 / 1.00	