# Pre-Quiz

**12/13** points earned (92%)

Excellent!

Retake

[Course Home](https://www.coursera.org/learn/text-mining/home/welcome)

Correct

1 / 1 points

1. Probability & Statistics: Rolling a 6-faced die, what's the probability of seeing a "6"?

1. 1
2. 1/3
3. 1/2
4. **1/6**

**Correct Response**

Correct! Each side of the die is equally likely to appear with each roll.

Correct

1 / 1 points

2. Probability & Statistics: Rolling a 6-faced die, what's the probability of seeing an even number?

1. 1/3
2. **1/2**

**Correct Response**

Correct! Even and odd sides of a die have equal chances of appearing with each roll.

1. 1

### 1/6

Correct

1 / 1 points

3. Probability & Statistics: Rolling a 6-faced die, given that the number is even, what's the probability that we've got a "6"?

1. 1/2
2. 1/6
3. **1/3**

**Correct Response**

The numbers 2, 4, and 6 have equal chances of appearing with each roll of the die.

1. 1

Correct

1 / 1 points

4. Probability & Statistics: Rolling two independent 6-faced dice, what's the probability that both dice show the same number?

1. 1/3
2. 1/2
3. 1
4. **1/6**

**Correct Response**

Correct! Out of the possible 36 combinations, 6 are pairs of the same number.

Correct

1 / 1 points

5. Linear algebra: What's the value of 2∗*x*⃗ , where *x*⃗ =[1.0,2.0.3.0]?

1. [1.0, 2.0. 3.0]
2. [2.0, 2.0. 3.0]
3. **[2.0, 4.0. 6.0]**

**Correct Response**

You correctly used element-wise multiplication to solve this problem!

Correct

1 / 1 points

6. Linear algebra: If *x*=[1,2,3] and *y*=[1,−2,2], what's the dot product *x*⋅*y*?

1. 4
2. 1
3. **3**

**Correct Response**

You correctly computed the dot product of these two vectors!

1. 2

Correct

1 / 1 points

7. Linear algebra: What is the result of multiplying matrix *M*=[1221] by a vector whose transpose is *xT*=[1,1],

1. [2,2]
2. [1,1]
3. [4,4]
4. **[3,3]**

**Correct Response**

You correctly computed the cross product of these two vectors!

Correct

1 / 1 points

8. Basic algebra: if x and y are both positive numbers, and x > y, then what can we say about log(x) and log(y)?

1. **log(x) > log(y)**

**Correct Response**

Correct! Logarithms monotonically increase.

1. This can't be determined
2. log(x) < log(y)

Correct

1 / 1 points

9. Basic algebra: Which of the following is true?

1. **log(xy) = log(x) + log(y)**

**Correct Response**

Correct! You identified the product property of logarithms.

1. log(x-y) = log(x) - log(y)
2. log (x+y) = log(x) + log(y)

Correct

1 / 1 points

10. Basic algebra: Which of the following is true (where exp(x) is the exponential function with e as the base)?

1. ln(x+y) = exp(x) + exp(y)
2. exp(x+y) = ln(x)\*ln(y)
3. **exp(ln (x)) = x**

**Correct Response**

Correct! You correctly recalled the relationship between exponential and logarithmic functions!

Correct

1 / 1 points

11. Basic Computer Science: Which of the following operations occur in a computer program faster?

1. **Reading a 32-bit integer from the memory**

**Correct Response**

Correct! RAM accesses faster than disk

1. Reading a 32-bit integer from the hard disk.

Incorrect

0 / 1 points

12. Basic Computer Science: Which of the following statements is true about data structures?

1. Hash table is faster for sequential access to the elements than a linked list
2. **A linked list is the best for supporting direct access to any element in the list**

**Incorrect Response**

Recall that linked lists also require storing header information.

1. A linked list to store *k* integers would require more storage space than an array to store the same *k* integers.

Correct

1 / 1 points

13. Basic Computer Science: What's the value of the binary code 1011?

1. 9
2. 10
3. **11**

**Correct Response**

Correct! You calculated the correct value of the binary code.

1. 12