✖

MapReduce for k-means

5 questions

| 1
point |

1.

Suppose we are operating on a 1D vector. Which of the following operation is **not** data parallel over the vector elements?

◯   Add a constant to every element.

◯   Multiply the vector by a constant.

◯   Increment the vector by another vector of the same dimension.

◯   Compute the average of the elements.

◯   Compute the sign of each element.

| 1
point |

2.

(True/False) A single mapper call can emit multiple (key,value) pairs.

◯   True

◯   False

| 1
point |

3.

(True/False) More than one reducer can emit (key,value) pairs with the same key simultaneously.

◉ True

◯ False

> 1
> point

4.

(True/False) Suppose we are running k-means using MapReduce. Some mappers may be launched for a new k-means iteration even if some reducers from the previous iteration are still running.

◉ True

◯ False

> 1
> point

5.

Consider the following list of binary operations. Which can be used for the reduce step of MapReduce? Choose all that apply.

☐ OP1(x1,x2) = MAX(x1, x2)

☐ OP2(x1,x2) = x1 + x2 - 2

☐ OP3(x1,x2) = 3*x1 + 2*x2

☐ OP4(x1,x2) = x1^2 + x2

☐ OP5(x1,x2) = (x1 + x2) / 2

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