

8.5 Exercises

1. Which programming model do not support CPUs, Many-Core architectures and GPUs:
 - a) OpenACC
 - b) OpenMP
 - c) CUDA
 - d) OpenCL
 - e) Kokkos
 - f) RAJA
 - g) TBB
2. Which programming models provide Task Parallelism concepts:
 - a) OpenACC
 - b) OpenMP
 - c) CUDA
 - d) OpenCL
 - e) Kokkos
 - f) RAJA
 - g) TBB
3. Which mathematical operation can be implemented with tightly nested loop constructs:
 - a) Matrix-Vector multiplication
 - b) Matrix-Matrix addition
 - c) Matrix-Matrix multiplication
4. Which of the following operations involves a reduction?
 - a) Computing the norm of a vector.
 - b) Finding the particle in a list closed to a given set of coordinates.
 - c) Performing a Matrix-Matrix multiplication.

d) Computing the total kinetic energy of a set of particles.

Solutions

1. c, g
2. b, e, g
3. a, b, c
4. a, b, d