# 20 Questions - CUDA Parallel Programming

## Question 1

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 32, block.y = 16 et une matrice de 10240 x 2560 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 32, block.y = 16 and a matrix of 10240 x 2560?

- a) grid.x = 320, grid.y = 160, Total threads = 26214400
- b) grid.x = 160, grid.y = 80, Total threads = 6553600
- c) grid.x = 640, grid.y = 320, Total threads = 104857600
- d) grid.x = 320, grid.y = 160, Total threads = 13107200

Réponse / Answer: a) grid.x = 320, grid.y = 160, Total threads = 26214400

## Question 2

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 64, block.y = 64 et une matrice de 12288 x 12288 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 64, block.y = 64 and a matrix of 12288 x 12288?

- a) grid.x = 192, grid.y = 192, Total threads = 150994944
- b) grid.x = 96, grid.y = 96, Total threads = 37748736
- c) grid.x = 384, grid.y = 384, Total threads = 603979776
- d) grid.x = 192, grid.y = 192, Total threads = 75497472

Réponse / Answer: a) grid.x = 192, grid.y = 192, Total threads = 150994944

## Question 3

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 16, block.y = 64 et une matrice de 4096 x 20480 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 16, block.y = 64 and a matrix of 4096 x 20480?

- a) grid.x = 256, grid.y = 320, Total threads = 83886080
- b) grid.x = 128, grid.y = 160, Total threads = 20971520
- c) grid.x = 512, grid.y = 640, Total threads = 335544320
- d) grid.x = 256, grid.y = 320, Total threads = 41943040

Réponse / Answer: a) grid.x = 256, grid.y = 320, Total threads = 83886080

## Question 4

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 16, block.y = 8 et une matrice de 3584 x 1536 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 16, block.y = 8 and a matrix of 3584 x 1536?

- a) grid.x = 224, grid.y = 192, Total threads = 5505024
- b) grid.x = 112, grid.y = 96, Total threads = 1376256
- c) grid.x = 448, grid.y = 384, Total threads = 22020096
- d) grid.x = 224, grid.y = 192, Total threads = 2752512

Réponse / Answer: a) grid.x = 224, grid.y = 192, Total threads = 5505024

## Question 5

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 8, block.y = 64 et une matrice de 1280 x 14336 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 8, block.y = 64 and a matrix of 1280 x 14336?

- a) grid.x = 160, grid.y = 224, Total threads = 18350080
- b) grid.x = 80, grid.y = 112, Total threads = 4587520
- c) grid.x = 320, grid.y = 448, Total threads = 73400320
- d) grid.x = 160, grid.y = 224, Total threads = 9175040

Réponse / Answer: a) grid.x = 160, grid.y = 224, Total threads = 18350080

## Question 6

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 16, block.y = 8 et une matrice de 4608 x 1536 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 16, block.y = 8 and a matrix of 4608 x 1536?

- a) grid.x = 288, grid.y = 192, Total threads = 7077888
- b) grid.x = 144, grid.y = 96, Total threads = 1769472
- c) grid.x = 576, grid.y = 384, Total threads = 28311552
- d) grid.x = 288, grid.y = 192, Total threads = 3538944

Réponse / Answer: a) grid.x = 288, grid.y = 192, Total threads = 7077888

## Question 7

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 16, block.y = 8 et une matrice de 4096 x 1792 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 16, block.y = 8 and a matrix of 4096 x 1792?

- a) grid.x = 256, grid.y = 224, Total threads = 7340032
- b) grid.x = 128, grid.y = 112, Total threads = 1835008
- c) grid.x = 512, grid.y = 448, Total threads = 29360128
- d) grid.x = 256, grid.y = 224, Total threads = 3670016

Réponse / Answer: a) grid.x = 256, grid.y = 224, Total threads = 7340032

## Question 8

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 64, block.y = 64 et une matrice de 6144 x 8192 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 64, block.y = 64 and a matrix of 6144 x 8192?

- a) grid.x = 96, grid.y = 128, Total threads = 50331648
- b) grid.x = 48, grid.y = 64, Total threads = 12582912
- c) grid.x = 192, grid.y = 256, Total threads = 201326592
- d) grid.x = 96, grid.y = 128, Total threads = 25165824

Réponse / Answer: a) grid.x = 96, grid.y = 128, Total threads = 50331648

## Question 9

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 64, block.y = 16 et une matrice de 12288 x 4608 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 64, block.y = 16 and a matrix of 12288 x 4608?

- a) grid.x = 192, grid.y = 288, Total threads = 56623104
- b) grid.x = 96, grid.y = 144, Total threads = 14155776
- c) grid.x = 384, grid.y = 576, Total threads = 226492416
- d) grid.x = 192, grid.y = 288, Total threads = 28311552

Réponse / Answer: a) grid.x = 192, grid.y = 288, Total threads = 56623104

## Question 10

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 16, block.y = 64 et une matrice de 4608 x 20480 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 16, block.y = 64 and a matrix of 4608 x 20480?

- a) grid.x = 288, grid.y = 320, Total threads = 94371840
- b) grid.x = 144, grid.y = 160, Total threads = 23592960
- c) grid.x = 576, grid.y = 640, Total threads = 377487360
- d) grid.x = 288, grid.y = 320, Total threads = 47185920

Réponse / Answer: a) grid.x = 288, grid.y = 320, Total threads = 94371840

## Question 11

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 64, block.y = 8 et une matrice de 16384 x 1792 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 64, block.y = 8 and a matrix of 16384 x 1792?

- a) grid.x = 256, grid.y = 224, Total threads = 29360128
- b) grid.x = 128, grid.y = 112, Total threads = 7340032
- c) grid.x = 512, grid.y = 448, Total threads = 117440512
- d) grid.x = 256, grid.y = 224, Total threads = 14680064

Réponse / Answer: a) grid.x = 256, grid.y = 224, Total threads = 29360128

## Question 12

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 64, block.y = 8 et une matrice de 18432 x 512 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 64, block.y = 8 and a matrix of 18432 x 512?

- a) grid.x = 288, grid.y = 64, Total threads = 9437184
- b) grid.x = 144, grid.y = 32, Total threads = 2359296
- c) grid.x = 576, grid.y = 128, Total threads = 37748736
- d) grid.x = 288, grid.y = 64, Total threads = 4718592

Réponse / Answer: a) grid.x = 288, grid.y = 64, Total threads = 9437184

## Question 13

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 64, block.y = 8 et une matrice de 6144 x 1792 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 64, block.y = 8 and a matrix of 6144 x 1792?

- a) grid.x = 96, grid.y = 224, Total threads = 11010048
- b) grid.x = 48, grid.y = 112, Total threads = 2752512
- c) grid.x = 192, grid.y = 448, Total threads = 44040192
- d) grid.x = 96, grid.y = 224, Total threads = 5505024

Réponse / Answer: a) grid.x = 96, grid.y = 224, Total threads = 11010048

## Question 14

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 32, block.y = 16 et une matrice de 5120 x 1536 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 32, block.y = 16 and a matrix of 5120 x 1536?

- a) grid.x = 160, grid.y = 96, Total threads = 7864320
- b) grid.x = 80, grid.y = 48, Total threads = 1966080
- c) grid.x = 320, grid.y = 192, Total threads = 31457280
- d) grid.x = 160, grid.y = 96, Total threads = 3932160

Réponse / Answer: a) grid.x = 160, grid.y = 96, Total threads = 7864320

## Question 15

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 16, block.y = 32 et une matrice de 2048 x 8192 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 16, block.y = 32 and a matrix of 2048 x 8192?

- a) grid.x = 128, grid.y = 256, Total threads = 16777216
- b) grid.x = 64, grid.y = 128, Total threads = 4194304
- c) grid.x = 256, grid.y = 512, Total threads = 67108864
- d) grid.x = 128, grid.y = 256, Total threads = 8388608

Réponse / Answer: a) grid.x = 128, grid.y = 256, Total threads = 16777216

## Question 16

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 16, block.y = 64 et une matrice de 4608 x 10240 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 16, block.y = 64 and a matrix of 4608 x 10240?

- a) grid.x = 288, grid.y = 160, Total threads = 47185920
- b) grid.x = 144, grid.y = 80, Total threads = 11796480
- c) grid.x = 576, grid.y = 320, Total threads = 188743680
- d) grid.x = 288, grid.y = 160, Total threads = 23592960

Réponse / Answer: a) grid.x = 288, grid.y = 160, Total threads = 47185920

## Question 17

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 16, block.y = 64 et une matrice de 5120 x 16384 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 16, block.y = 64 and a matrix of 5120 x 16384?

- a) grid.x = 320, grid.y = 256, Total threads = 83886080
- b) grid.x = 160, grid.y = 128, Total threads = 20971520
- c) grid.x = 640, grid.y = 512, Total threads = 335544320
- d) grid.x = 320, grid.y = 256, Total threads = 41943040

Réponse / Answer: a) grid.x = 320, grid.y = 256, Total threads = 83886080

## Question 18

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 32, block.y = 16 et une matrice de 10240 x 3584 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 32, block.y = 16 and a matrix of 10240 x 3584?

- a) grid.x = 320, grid.y = 224, Total threads = 36700160
- b) grid.x = 160, grid.y = 112, Total threads = 9175040
- c) grid.x = 640, grid.y = 448, Total threads = 146800640
- d) grid.x = 320, grid.y = 224, Total threads = 18350080

Réponse / Answer: a) grid.x = 320, grid.y = 224, Total threads = 36700160

## Question 19

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 16, block.y = 32 et une matrice de 5120 x 5120 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 16, block.y = 32 and a matrix of 5120 x 5120?

- a) grid.x = 320, grid.y = 160, Total threads = 26214400
- b) grid.x = 160, grid.y = 80, Total threads = 6553600
- c) grid.x = 640, grid.y = 320, Total threads = 104857600
- d) grid.x = 320, grid.y = 160, Total threads = 13107200

Réponse / Answer: a) grid.x = 320, grid.y = 160, Total threads = 26214400

## Question 20

Quelle est la dimension de la grille et le nombre total de threads pour une configuration avec block.x = 16, block.y = 16 et une matrice de 1536 x 2560 ? / What is the grid dimension and the total number of threads for a configuration with block.x = 16, block.y = 16 and a matrix of 1536 x 2560?

- a) grid.x = 96, grid.y = 160, Total threads = 3932160
- b) grid.x = 48, grid.y = 80, Total threads = 983040
- c) grid.x = 192, grid.y = 320, Total threads = 15728640
- d) grid.x = 96, grid.y = 160, Total threads = 1966080

Réponse / Answer: a) grid.x = 96, grid.y = 160, Total threads = 3932160