

# Assignment 5

Guocheng Qian

## Question 1

Device(s): 2

16 16 256

File read successfully

1 16 16

File read successfully

sum is 669.906189

sum is 16397.593750

iteration #0, with rho = 16397.6

sum is 42145.250000

sum is 1043766.500000

sum is 0.090899

sum is 4.149488

sum is 0.090899

sum is 4.149488

iteration #1, with rho = 4.14949

sum is 0.304602

sum is 13.684595

sum is 0.000003

sum is 0.654240

sum is 0.000003

sum is 0.654240

iteration #2, with rho = 0.65424

sum is -0.006261

sum is 1.443758

sum is 0.003381

sum is 0.041198

sum is 0.003381

sum is 0.041198

iteration #3, with rho = 0.0411981

sum is -0.001545

sum is 0.043634

sum is 0.006715

sum is 0.057625

sum is 0.006715

sum is 0.057625

iteration #4, with rho = 0.0576251

sum is -0.145227

sum is 0.483151  
sum is 0.034312  
sum is 0.313966  
sum is 0.034312  
sum is 0.313966  
iteration #5, with  $\rho = 0.313966$       sum is 2.353447  
sum is 3.389629  
sum is 0.000173  
sum is 0.011916  
sum is 0.000173  
sum is 0.011916  
iteration #6, with  $\rho = 0.0119163$       sum is -0.000447  
sum is 0.011166  
sum is 0.000013  
sum is 0.006402  
sum is 0.000013  
sum is 0.006402  
iteration #7, with  $\rho = 0.00640181$       sum is 0.000090  
sum is 0.009580  
sum is 0.000000  
sum is 0.002428  
sum is 0.000000  
sum is 0.002428  
iteration #8, with  $\rho = 0.00242819$       sum is 0.000075  
sum is 0.001843  
sum is 0.000162  
sum is 0.008771  
sum is 0.000162  
sum is 0.008771  
iteration #9, with  $\rho = 0.00877144$   
sum is -0.015046  
sum is 0.426715  
sum is 0.000072  
sum is 0.002265  
sum is 0.000072  
sum is 0.002265  
iteration #10, with  $\rho = 0.00226459$       sum is -0.000001  
sum is 0.002756  
sum is 0.000073  
sum is 0.000296  
sum is 0.000073  
sum is 0.000296  
iteration #11, with  $\rho = 0.000295746$       sum is 0.000165  
sum is 0.000489

sum is 0.000002  
sum is 0.000061  
sum is 0.000002  
sum is 0.000061  
iteration #12, with  $\rho = 6.10026e-05$       sum is -0.000001  
sum is 0.000014  
sum is 0.000039  
sum is 0.000213  
sum is 0.000039  
sum is 0.000213  
iteration #13, with  $\rho = 0.00021349$       sum is 0.001083  
sum is 0.005746  
sum is 0.000003  
sum is 0.000287  
sum is 0.000003  
sum is 0.000287  
iteration #14, with  $\rho = 0.000287313$       sum is -0.000009  
sum is 0.000100  
sum is 0.000014  
sum is 0.000414  
sum is 0.000014  
sum is 0.000414  
iteration #15, with  $\rho = 0.000414402$       sum is -0.000058  
sum is 0.000467  
sum is 0.000035  
sum is 0.000867  
sum is 0.000035  
sum is 0.000867

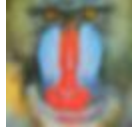
Solution found at iteration #16, with  $\rho = 0.000867$

minrho was 0.000061  
elapsed time: 160.169ms  
errors:  
sum | 0.0985584  
avgs | 0.0061599  
max | 0.015625

## Question 2:



original



blurred



deblurred