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1. (5 Points) True or False? Why?

- a. We can increase the computer speed with a larger Hard Disk. []
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- b. In Cuda platform, the GPU initiate data request from CPU to GPU. []
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- c. The GPU consists of a set of physical chips called blocks, each contains a set of threads. []
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- d. The Mapping pattern represents a one to one relation between input and output. []
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- e. It's easier to parallelize Scatter pattern than Map pattern []
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2. (5 points) Read the following code snippets then answer the questions.

```
1 float out[], in[];
2 int i=threadIdx.x, j=threadIdx.y;
3 const float pi=3.1415;
4 out[i*16+j]=in[j*16+i];
5 out[i]=pi*in[i];
6 if(i%2){
7     out[i-1]+=pi*in[i];    out[i+1]+=pi*in[i];
8     out[i]=(in[i]+in[i-1]+in[i+1]*pi/3.0f)
9 }
```

a. Indicate wither the following lines represent ?.

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b. Rewrite the instruction to fix the problem.

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c. How many threads does this instruction launch?

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d. Rewrite the instruction to apply each thread on matrix of size (10 x 10).