Module 3.5

Consider the following Numba Cuda code for a "dot product".

```
TPB = 16
def dot_product(out, a, b, size) -> None:
        a_shared = cuda.shared.array(TPB, numba.float32)
        b_shared = cuda.shared.array(TPB, numba.float32)
        i = cuda.blockIdx.x * TPB + cuda.threadIdx.x
        local_i = cuda.threadIdx.x
        if i < size:
            a_shared[local_i] = a[i]
            b_shared[local_i] = b[i]
        cuda.syncthreads()
        if i == 0:
            acc = 0
            for j in range(TPB):
                acc += (b_shared[j] * a_shared[j])
            out[0] = acc
```

1   1 point

What is the max number of global reads per thread in this code?

Type your answer...

2   1 point

What is the max number of shared reads per thread in this code?

Type your answer...

3   1 point

What is the max number of shared writes per thread in this code?

Type your answer...