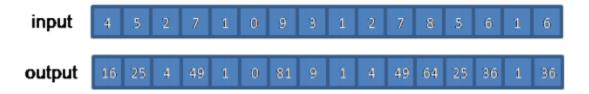
The following kernel function illustrates how these functions are used:

```
__kernel void square (__global int *input, __global int *output)
{

int id = get_global_id(0);

output[id] = input[id] * input[id];
}
```

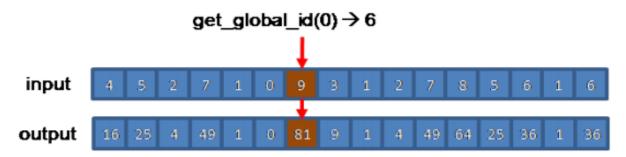
The following figure shows the input and expected output:



Since the **kernel function** is a **data parallel function**, it is **executed for each work-item**.

When a work-item calls **get\_global\_id(0)** the request is **for the unique global** workitem ID used to index the data.

The example below, the **work-item instance** is **returned id=6** when it makes a call to **get\_global\_id(0)**. The **work-item** can then use the **id to index the data** to perform the operation.



If, for example, the kernel function is enqueued by indicating that the input will be divided into groups of eight elements, the results of the various work-item functions will appear as shown in the following image.

