

001

```
int* res = malloc(2 * sizeof(int) );  
res[0] = 2;  
res[1] = 6;  
(*returnSize) = 2;  
return res;
```

001 and 002

Know/compute the answer for small logs without a calculator:

$\log_2(16) = 4$ $\leftarrow 2^4 = 16 = 2 \cdot 2 \cdot 2 \cdot 2 \rightarrow 32$

$1 = 2^0, 2 = 2^1, 4, 8, 16, 32 = 2^5, 64 = 2^6$

$\log_2(40) = \text{say } 5.2$

32, ... 40, ... 64

5 6

$\log_3(27) = 3$