

Assignment template using L^AT_EX

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Question 1

(a) $E = mc^2$

(b) 1



Figure 1: A smily face

(c) `print(chr(sum(range(ord(min(str(not()))))))))`

Question 2

(a)

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(b)

(i)

The pseudocode for Euclid's algorithm is as follows:

Algorithm 1 Euclid's algorithm

Find the greatest common divisor of two numbers.

```
1: procedure EUCLID( $a, b$ )
2:    $r \leftarrow a \bmod b$ 
3:   while  $r \neq 0$  do
4:      $a \leftarrow b$ 
5:      $b \leftarrow r$ 
6:      $r \leftarrow a \bmod b$ 
7:   end while
8:   return  $b$ 
9: end procedure
```

(ii)

The Python code for the Euclid's algorithm is as follows:

```
def euclid(a: int, b: int) -> int:
    r: int = a % b
    while r != 0:
        a, b = b, r
        r = a % b
    return b

print(euclid(10, 5))
```