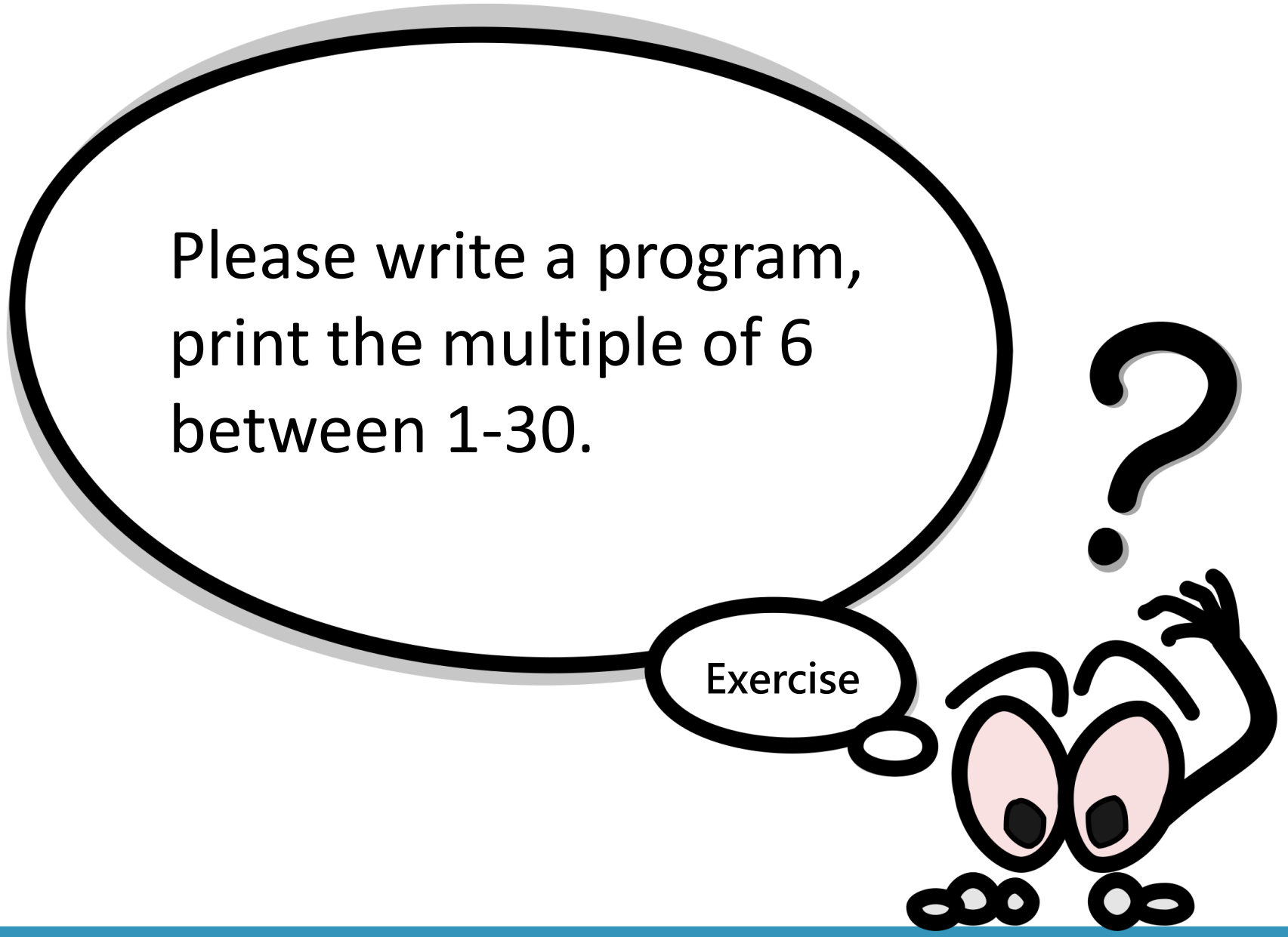
Python

if is a good helper for loop

Please write a program, print the multiple of 6 between 1-30.

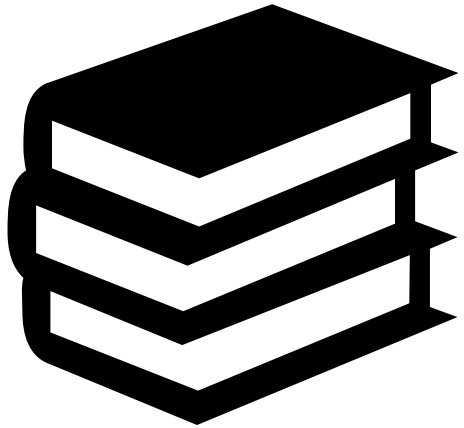


Python

Solve the problem with python

```
i = 6
while i <= 30:
    if i % 6 == 0:
        print(i)
    i = i + 1
```

Choose what I want



Review some used knowledge

Refuse line break

- Parameter control can be added: end is the parameter that controls line breaks
- The use of end parameter is as follow:
  - end=“”need to be added after print
- Here is the sample reference

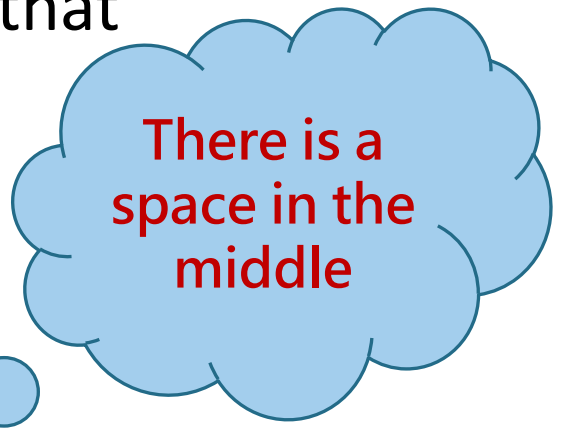
```
# sample of refuse line break
print(“2-3=5”, end=“”)
print(“2-3=5”)
```

Run

```
2-3=52-3=5
```

Refuse line break, but there is a space between two data

- Parameter control can be added: end is the parameter that controls line breaks
- The use of end parameter is as follow:
  - end=“”need to be added after print
  - Add a blank space between double quotes
- Here is the sample reference




```
#sample of refuse line break
print(“2-3=5”, end=“ ”)
print(“2-3=5”)
```

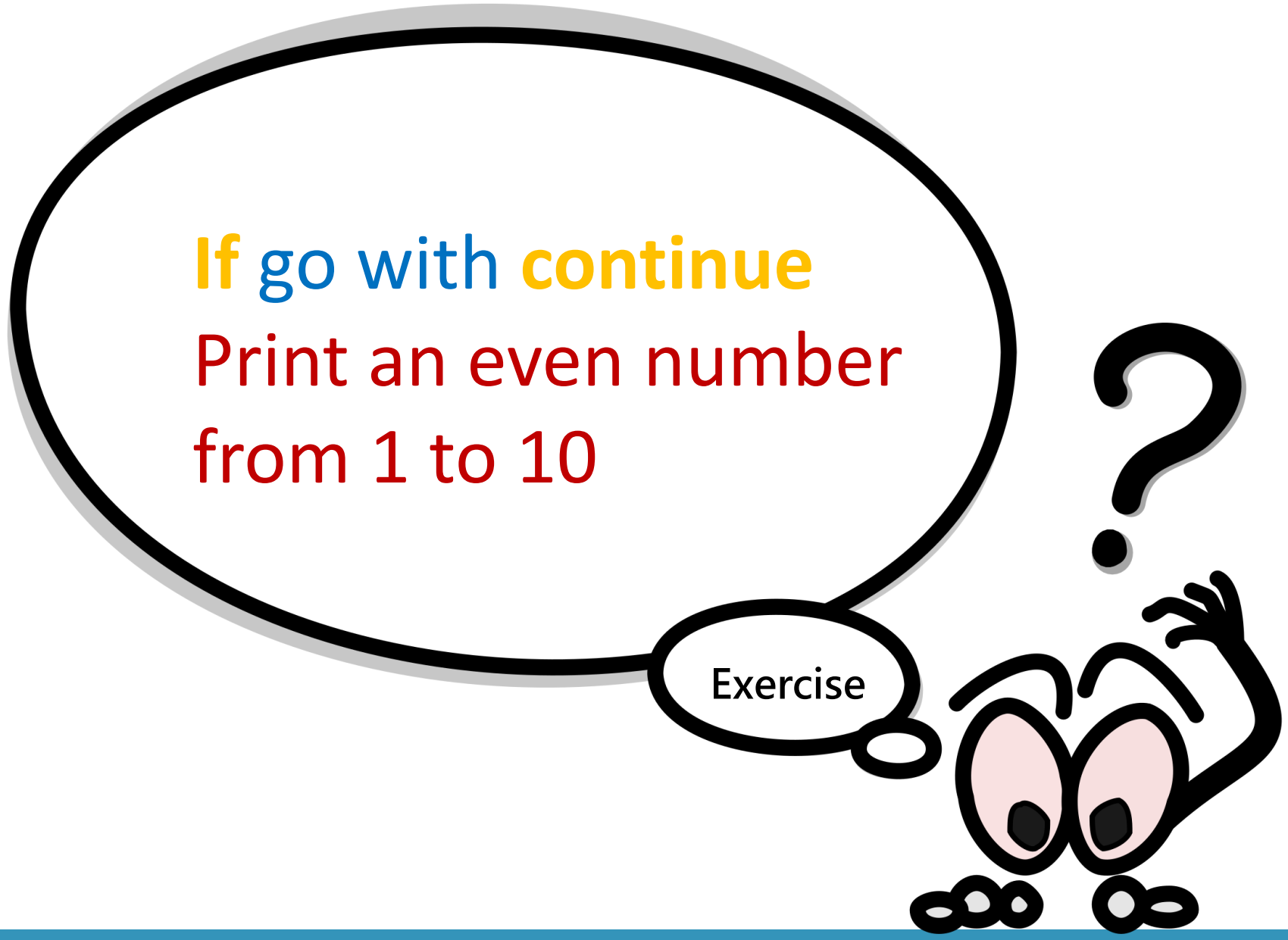
Python

Extended concepts

Good partner with if

continue	break

If go with continue
Print an even number
from 1 to 10



Print an even number from 1 to 10

- Loops from 1 to 10
- Print out the result when meet an even number.

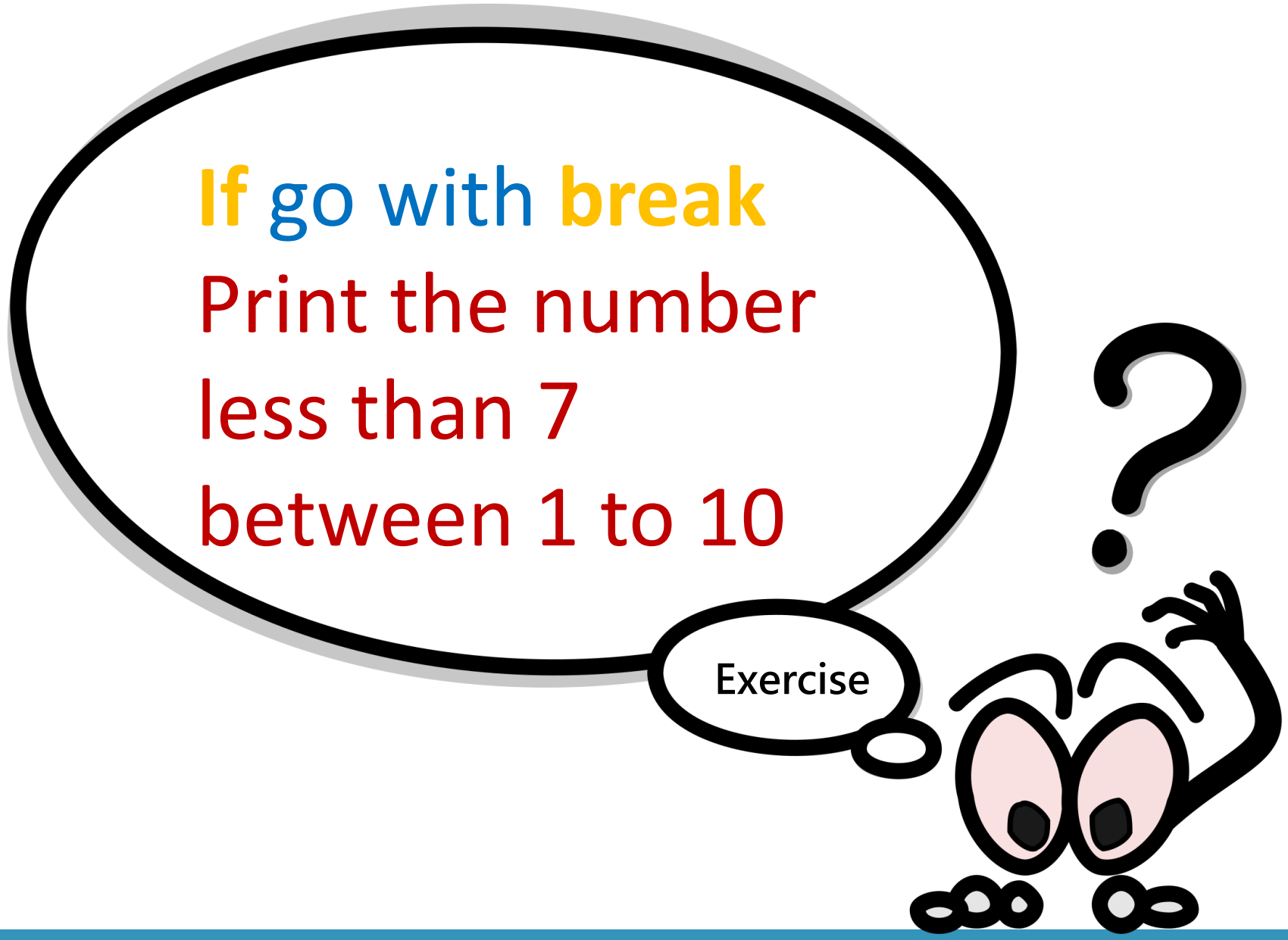
```
i = 0
while i < 10:
  i = i + 1
  if i % 2 == 0:
    print(i)
```

- Print out the loop between 1 to 10
- But skip when meet an odd number.

```
i = 0
while i < 10:
  i = i + 1
  if i % 2 != 0:
    continue
  print(i)
```

continue means stop the current iteration of the loop, and continue with the next

If go with break
Print the number
less than 7
between 1 to 10



Print the number less than 7 between 1 to 10

- Check the loop between 1 to 10
- Print the number less than 7

```
i = 0
while i < 10:
  if i < 7:
    print(i)
  i = i + 1
```

- Print out the loop between 1 to 10
- Break the loop when the number greater than 7

```
i = 0
while i < 10:
  if i >= 7:
    break
  print(i)
  i = i + 1
```

Break means stop all the loop

The application of if… break, whether two numbers are prime number

```
num1 = int(input())
num2 = int(input())
minValue = num1
if num2<minValue:
        minValue=num2
i = 2
match = 0                                   Just find one
while i <= minValue:
        if num1 % i == 0 and num2 % i == 0:
                match = 1
        break
        i = i+1
if match == 1:
        print( "{0} and {1} are not prime number.".format(num1, num2))
else:
        print( "{0} and {1} are prime number.".format(num1, num2))
```

- If there is a common factor between two numbers, no prime number of each other anymore.

Break means stop all the loop

- Review：
  - **break:** stop the all loop
  - **continue**: stop the current iteration of the loop, and continue with the next

- break / continue are order to control the loop. There are also three order in the for loop.