

Worksheet 02: Python Basic Arithmetic

Name: _____ Date: _____

Instructions

- Answer in the blanks.
 - For “write code” questions, write valid Python code.
 - For “what does it print” questions, write the exact output.
-

Part A – Review: `int` and `float`

1) `int` or `float` ?

Look at the code:

```
a = 3
b = 3.0
c = -0.25
```

Fill in:

- `type(a)` is _____
 - `type(b)` is _____
 - `type(c)` is _____
-

Part B – Addition `+` and Subtraction `-`

2) Write code: add and subtract

Write Python code to create:

- `x` with value 12
- `y` with value 5

Then print:

1. `x + y`
2. `x - y`

3) What does it print? (two lines)

```
x = 10
y = 4

print(x - y)
print(x + y - 3)
```

Output:

4) Word problem: game points

You start with 20 points.

- You lose 7 points.
- Then you win 5 points.

Fill in:

- Points after losing : _____
 - Final points after winning : _____
-

Part C — Multiplication

5) What does it print?

```
stickers_per_page = 6  
pages = 4  
  
total_stickers = stickers_per_page * pages  
print(total_stickers)
```

Output:

6) Write code: minutes to seconds

There are seconds in minute.

Write code to compute how many seconds are in minutes. Use variables `minutes` and `seconds`.

Part D — Division: `/` and `//`

7) True division `/` (always a float)

What does this print?

```
print(9 / 3)
print(7 / 2)
print(1 / 4)
```

Output:

8) Floor division `//` (whole number part only)

What does this print?

```
print(9 // 3)
print(7 // 2)
print(1 // 4)
```

Output:

9) True vs floor division

What is the output?

```
print(9 / 2)
print(9 // 2)
```

Output:

Part E – Remainder \% (Modulo)

10) What does it print?

```
print(10 % 3)  
print(12 % 5)  
print(14 % 7)
```

Output:

11) Even or odd?

A number is:

- even if number \% 2 is `0`
- odd if number \% 2 is `1`

Fill in:

- $14 \% 2$ is _____ → even / odd (circle one)
- $17 \% 2$ is _____ → even / odd (circle one)

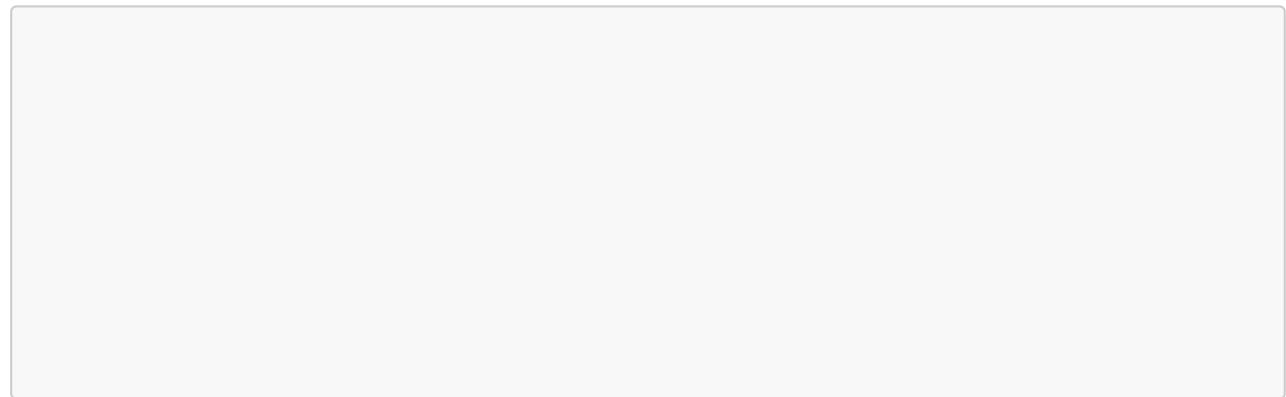
Part F – Sharing with // and \%

12) Sharing marbles

You have `23` marbles and `4` friends.

Write a Python program to print:

1. How many marbles each friend gets (same number for everyone)
2. How many marbles are left over

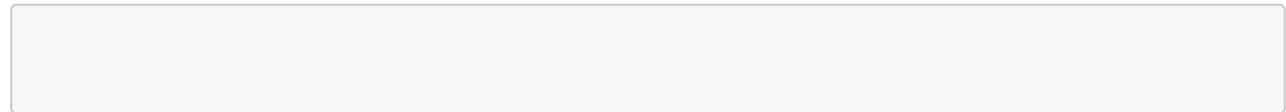


Part G — Operator precedence (order of operations)

13) What does it print?

```
print(5 + 8 // 3)
print((5 + 8) // 3)
```

Output:

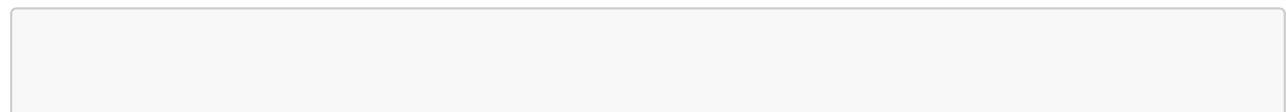


14) Precedence with `*` and `%`

What does it print?

```
print(10 % 4 + 3 * 2)
print((10 % 4 + 3) * 2)
```

Output:



Part H — Type conversion: `int()` and `float()`

15) What does it print?

```
a = 3.9  
b = int(a)  
  
c = 5  
d = float(c)  
  
print(b)  
print(d)
```

Output:

Part I – Mini coding task (challenge)

16) Build a tiny “calculator”

Create:

- a = 17
- b = 5

Then print (in this exact order):

1. a + b
2. a - b
3. a * b
4. a / b
5. a // b
6. a % b

Write your code:

