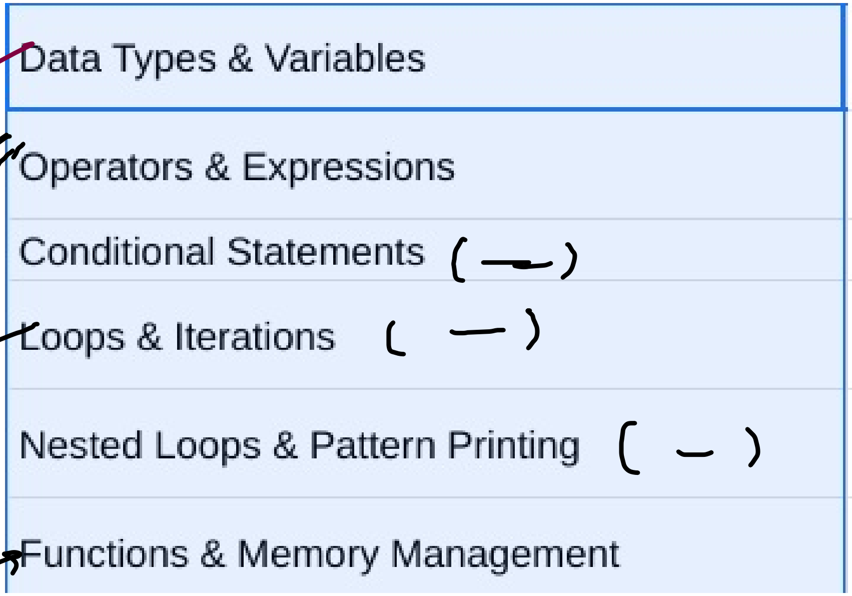
REVISION SESSION

We will starts @ 9:10pm

Printing in Python

Comment



Data Types & Variables

Operators & Expressions

Conditional Statements

Loops & Iterations

Nested Loops & Pattern Printing

Functions & Memory Management

Printing in Python

print (" ______ ")

print (17)

Print the below pattern using print statement

```
* * * * *
      *
    *
  *
* * * * *
```

⇒ 5 mins

↳ 9:18 - 9:24 pm

```
print("*****")
print("   *")
print("  *")
print(" *")
print("*****")
```

Comments in Python

↳ ⓐ Comments can be used to explain the code.

↳ ⓑ Comments can be used to make the code more readeble.

Types of Comments

① Single line comment ("#")

② Multi line comment (""" ''''')

Variables and Datatypes

→ type function.

↳ Variables : containers to store data values.

↳ x = 15 → integer

integer

↳ y = 20.5

float

datatype

↳ name = "abc" → string

string

↳ Name = "Abc"

x = int(15) → x = 15

y = float(15)

y = 15.0

z = str(15)

z = "15" | '15'

Java → int x = 15

↓

datatype.

print(type(x))

```
x = 15
y = 20.15
z = "Abc"
q = 'abc'

print(x)
print(y)
print(z)
print(q)

a = int(10)
b = float(10)
c = str(10)


print(type(x))
print(type(y))
print(type(z))
print(type(q))
```

↳ variable names in python are case-sensitive.

abc

Abc

ABC

aBC

abC

Rules for Python variables

↳ ⓐ A variable name cannot start with a number X   1bc X

↳ ⓑ A variable name must start with a letter or underscore (_)

↳ ⓒ A variable name can contain only alpha numeric and underscore (A-Z , a-z , 0-9 , _)

↳ ⓓ Variable names are case-sensitive (abc , Abc , ABC)

↳ ⓔ A variable name cannot be any Python keyword (for, while, print) X

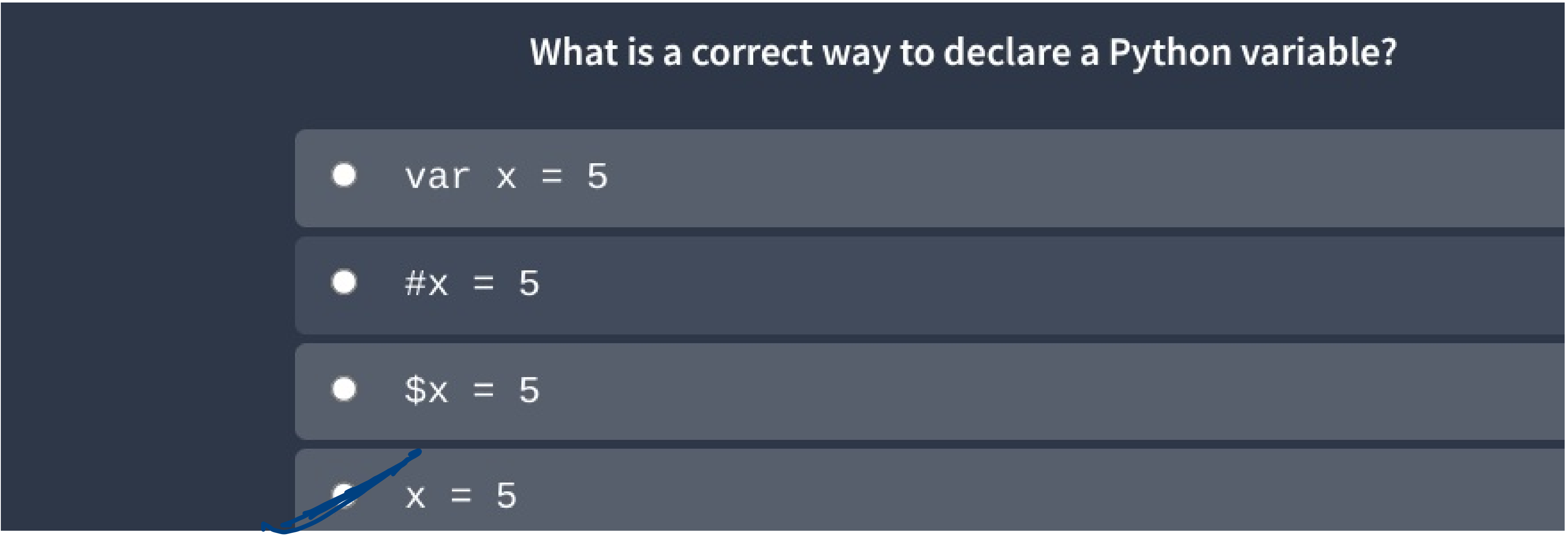
Assign Multiple values.

↳ a, b, c, d → 10

a =10
b=10
c=10
d=10

⇒ $\boxed{a = b = c = d = 10}$

↳ a, b, c = 10, 20, 30 ⇒ a=10
b=20
c=30



What is a correct way to declare a Python variable?

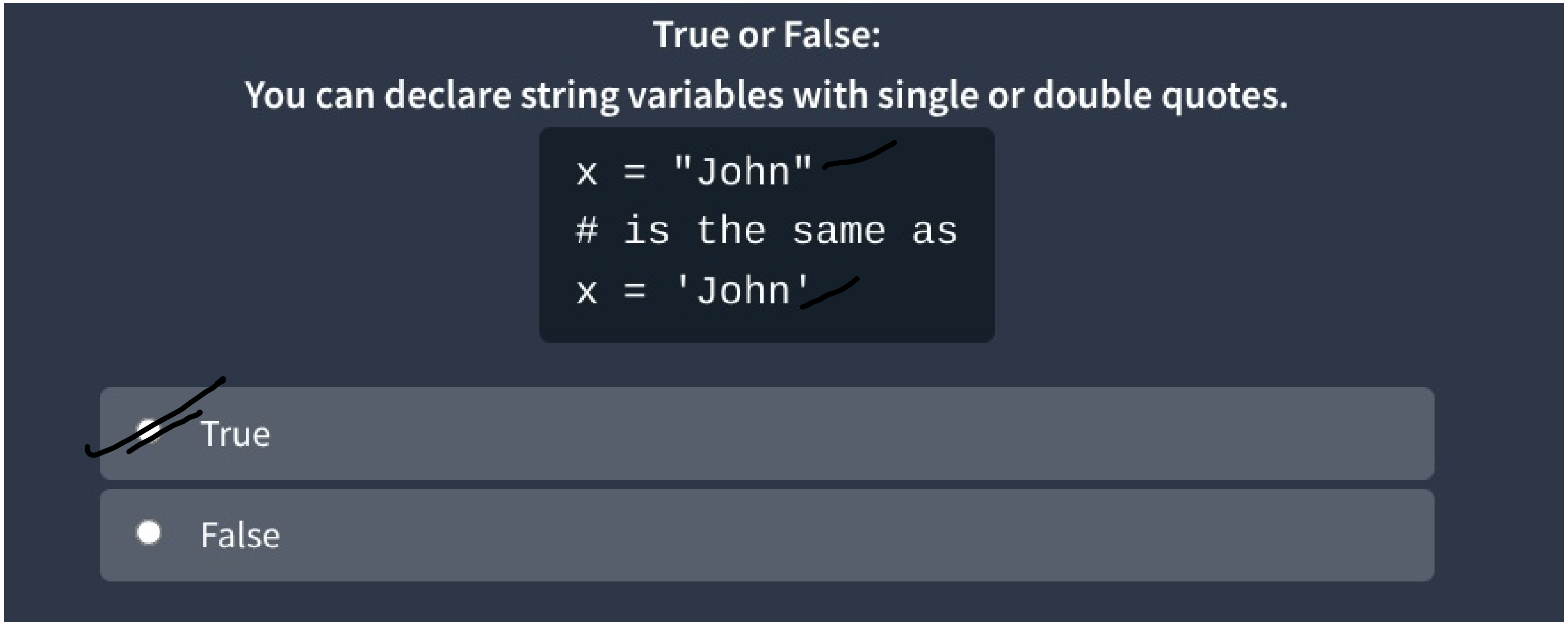
○ `var x = 5`

○ `#x = 5`

○ `$x = 5`

○ [✓ `x = 5`]

Str



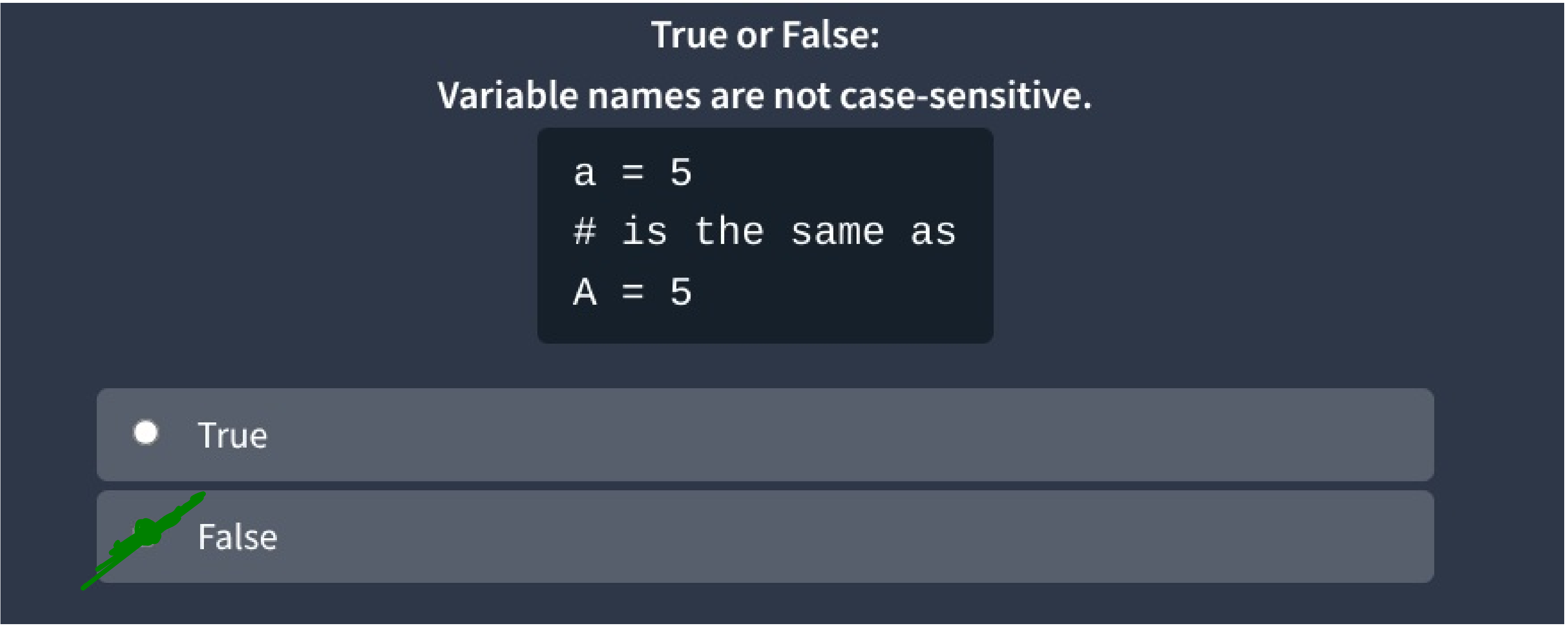
True or False:

You can declare string variables with single or double quotes.

```
x = "John" ✓
# is the same as
x = 'John' ✓
```

[✓ True]

○ False



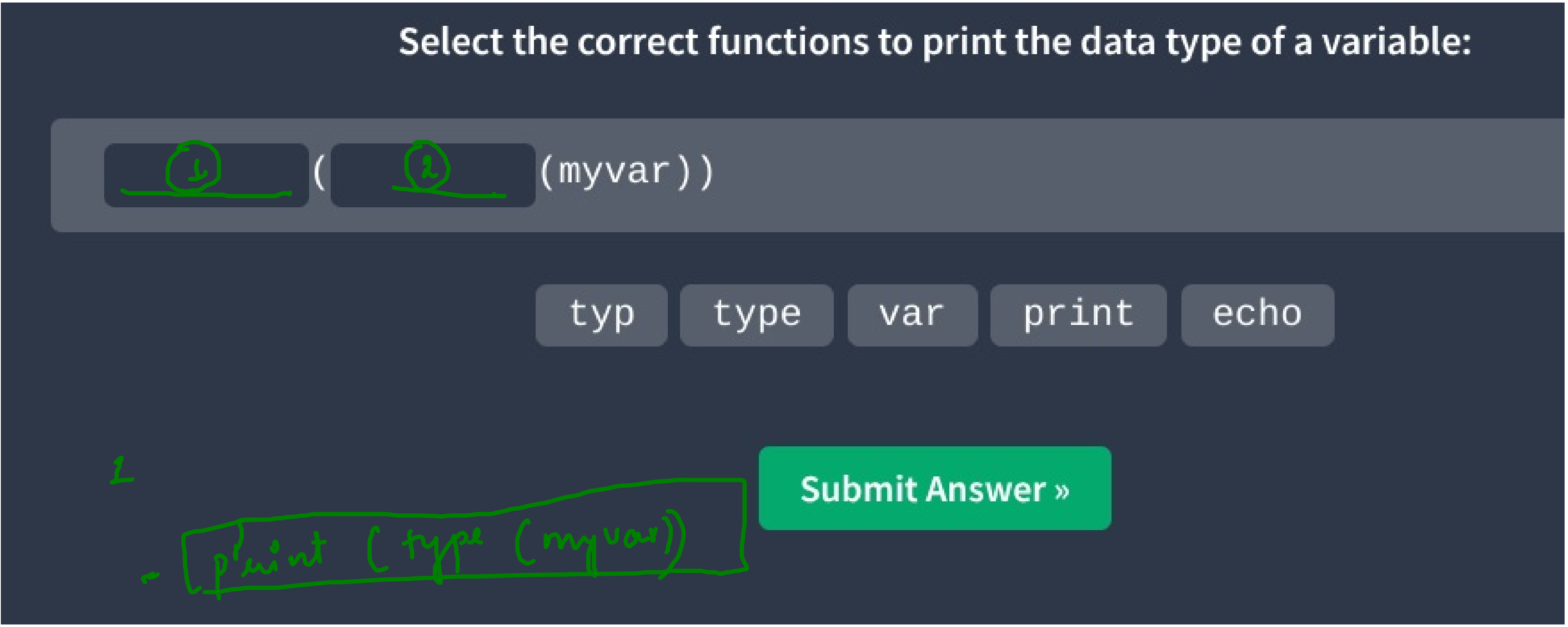
True or False:

Variable names are not case-sensitive.

```
a = 5
# is the same as
A = 5
```

○ True

[✓ False]



Select the correct functions to print the data type of a variable:

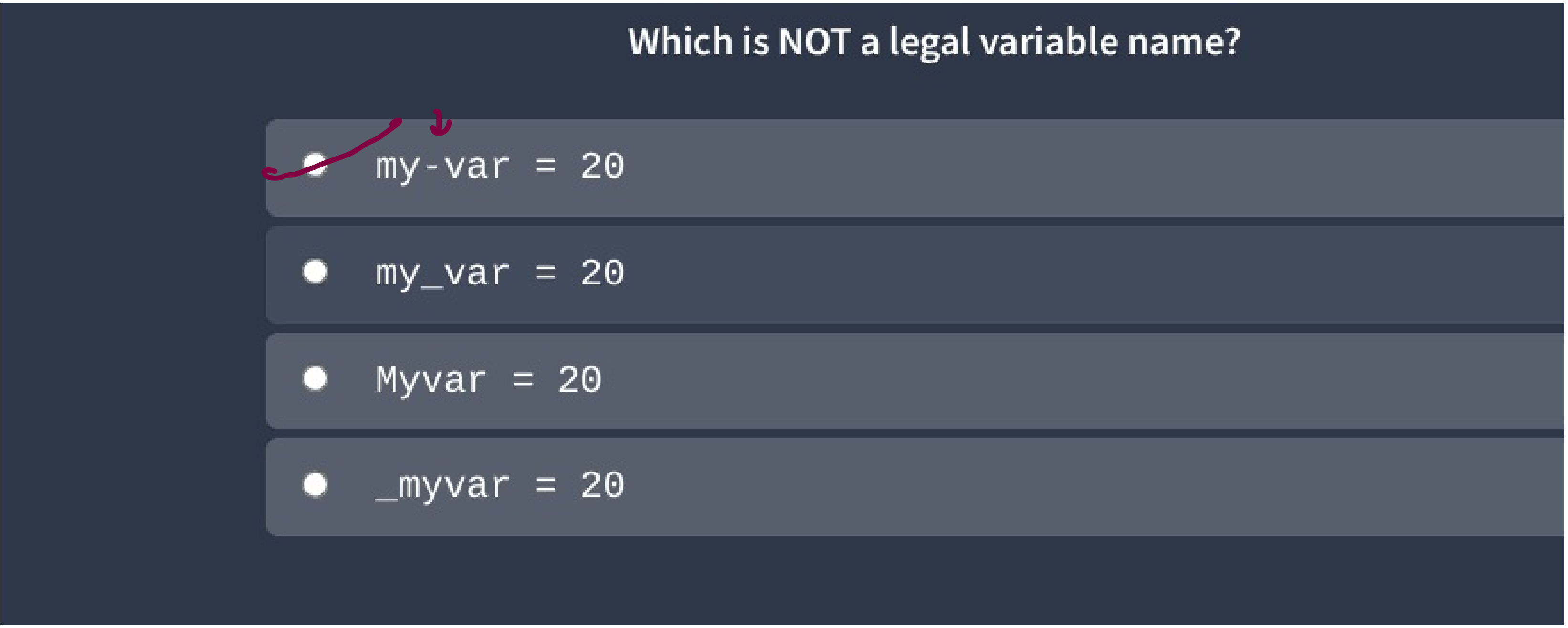
```
___1___(___2___(myvar))
```

typ type var print echo

1

print (type (myvar))

alphanumeric ·



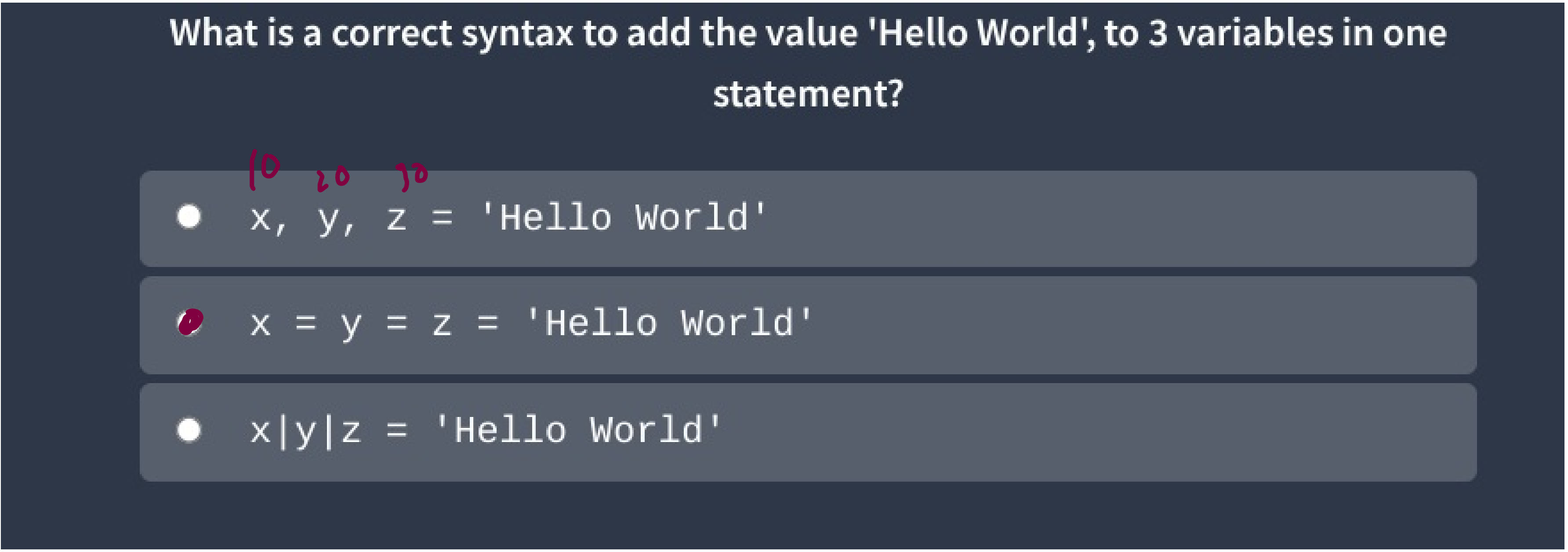
Which is NOT a legal variable name?

[✓ ○ my-var = 20]

○ my_var = 20

○ Myvar = 20

○ _myvar = 20



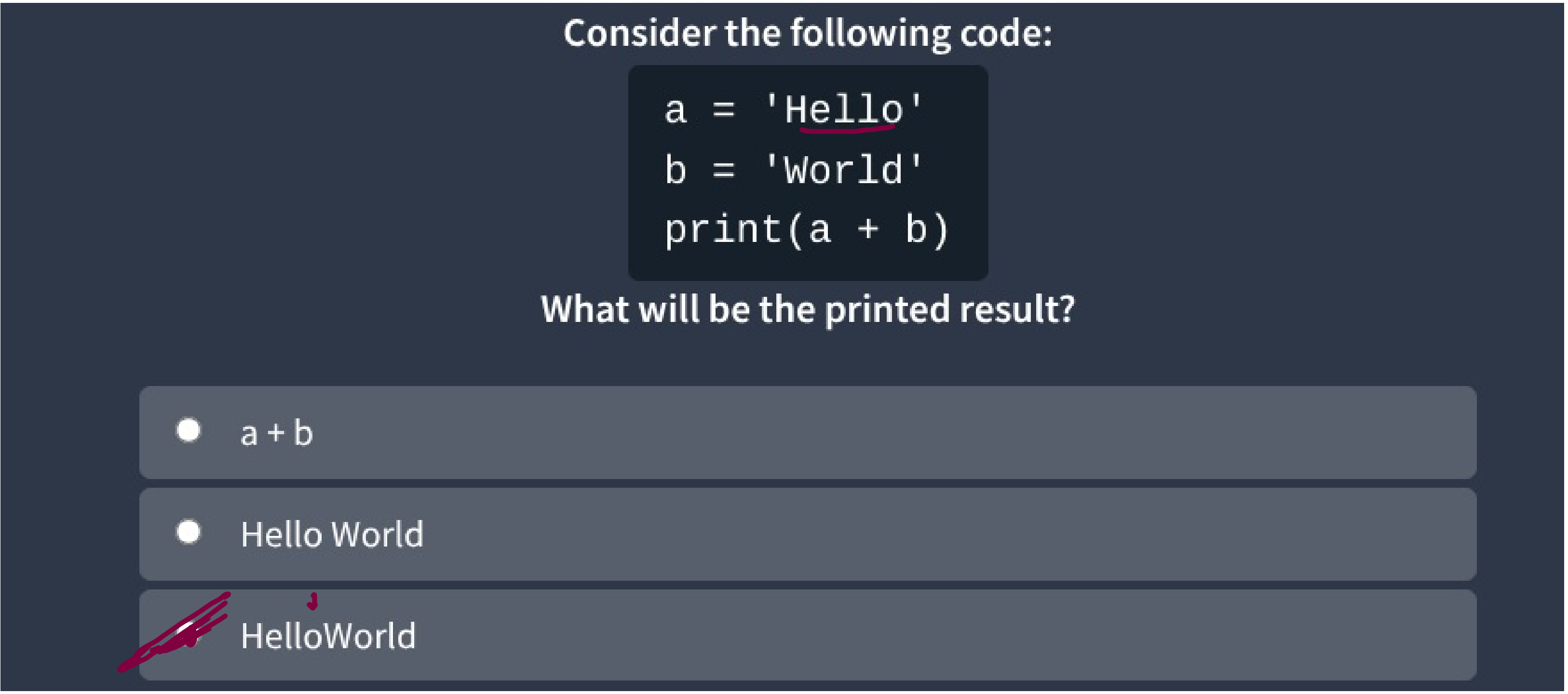
What is a correct syntax to add the value 'Hello World', to 3 variables in one statement?

10 20 30

○ `x, y, z = 'Hello World'`

● `x = y = z = 'Hello World'`

○ `x|y|z = 'Hello World'`



Consider the following code:

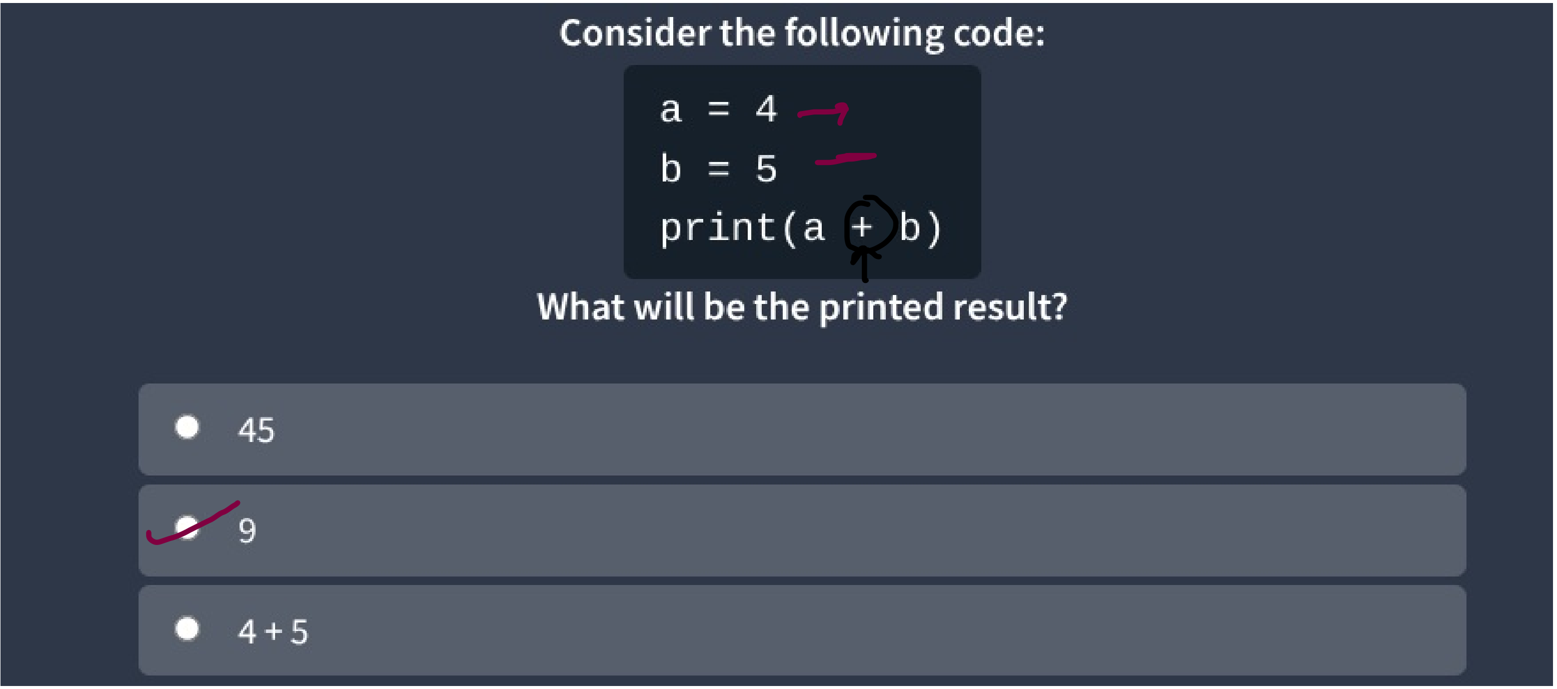
```
a = 'Hello'
b = 'World'
print(a + b)
```

What will be the printed result?

○ a + b

○ Hello World

[✓ HelloWorld]



Consider the following code:

```
a = 4
b = 5
print(a + b)
```

What will be the printed result?

○ 45

[✓ ○ 9]

○ 4 + 5

4+5 = 9

Operators

↳ are used to perform operations on variables or values.

print(10$\overset{\downarrow}{+}$5)

↳ Types of operators in Python.

(a) Arithmetic operators (used with numeric values to perform common mathematical operations)

$(+,\ -,\ *,\ \overset{\downarrow}{/},\ \underset{\downarrow}{\%},\ **,\ \overset{\downarrow}{//})$

remainder

10%3 = 1

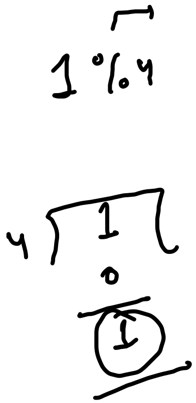
```
   3
3 )10(
   9
   ‾
   1
```

/ → floating

// → Integer

② Assignment Operator (=)

$x = 5$



$x = x+5$ ⇒ $x += 5$ (short hand)

$x = x-5$ ⇒ $x -= 5$

③ Comparison Operator → (True | False)

↳ are used to compare values.

↳ == (equal to)

↳ != (not equal)

↳ > (Greater than)

↳ < (less than)

↳ >= (Greater than equal to)

↳ <= (less than equal to)

④ Logical operators → true | false

↳ Ex :- To vote

↳ age >= 18

↳ voter id card

↳ are used to combine conditional statements

↳ and , or, not

↳ and → true → when all the conditions are true.

↳ or → true → when any one condition is true

↳ not → reverse the result → true → false | false → true.

① Voter

↳ age >= 18

↳ voter id card → Y / N

② A given vehicle is a car

③ → $\underbrace{s1}_{\text{optional}}, \underbrace{s2, s3}_{\text{mandatory}}$ —

① age >= 18 and voter_id == 'Y'

③ (s2 == "Pass" and s3 == "Pass")

② wheel == 4 and steering == 'Y'