

PM1 Quick Reference

Output & Input

```
print("Hello")           # Display text
print("Value:", 42)      # Multiple items
name = input("Name? ")  # Returns string!
```

Variables

```
message = "Hello"      # String
count = 10              # Integer
price = 19.99           # Float
is_valid = True         # Boolean
```

Naming: Start with letter/_, use snake_case

Data Types

str	"hello"	Text
int	42	Whole numbers
float	3.14	Decimals
bool	True/False	Yes/no

Type Conversion

```
int("42")      # String -> 42
float("3.14")   # String -> 3.14
str(42)         # Number -> "42"
```

Critical: input() ALWAYS returns string!
age = int(input("Age: "))

Arithmetic Operators

+	Add	5 + 3	8
-	Subtract	5 - 3	2
*	Multiply	5 * 3	15
/	Divide	5 / 2	2.5
//	Floor div	5 // 2	2
%	Remainder	5 % 2	1
**	Power	5 ** 2	25

Comparison Operators

==	Equal	5 == 5	True
!=	Not equal	5 != 3	True
<	Less than	3 < 5	True
>	Greater	5 > 3	True
<=	Less/eq	5 <= 5	True
>=	Greater/eq	5 >= 3	True

Watch out: = assigns, == compares!

Strings

```
name = "Alice"          # Double quotes
name = 'Alice'          # Single quotes
full = "Hi" + " World"  # "Hi World"
length = len("Hello")   # 5
```

Comments

```
# This is a comment
price = 100 # End of line
```

Common Errors

TypeError: can only concatenate str

Problem: Adding string + number

Fix: Use str() or , in print

TypeError: unsupported operand

Problem: Math on a string

Fix: Use int() or float()

NameError: name not defined

Problem: Variable doesn't exist

Fix: Check spelling, define first

SyntaxError

Problem: Typo in code

Fix: Check quotes, brackets, colons