



FUNCTION ARGUMENTS AND PARAMETERS

Technically Different



ARGUMENTS VS. PARAMETERS

ARGUMENTS

- Appear in function calls
 - `sqrt(x);`
 - `double y = sin(M_PI / 4);`

- `payment = mortgagePayment(100000.00, 0.08, 30);`
- `double mortgagePayment(double p, double r, int n) { ... }`

PARAMETERS

- Appear in function definitions
 - `double sqrt(double x) { ... }`
 - `double sin(double angle) { ... }`



PASSING ARGUMENTS TO PARAMETERS MATCHING BASED ON POSITION

```
my_function(10, 20, 30);           // function call
                                //
                                //
                                //
void my_function(int a, int b, int c) // function definition
{
    .
    .
    .
}
```



THREE WAYS OF PASSING PARAMETERS

- Pass by value
 - Most common
 - C++ and Java
- Pass by pointer
 - Invented name: Really, pass by value but the value is an address
 - C++ and (although hidden) Java objects
- Pass by reference
 - C++ uses “reference” differently than other languages
 - Must be compiled and linked (can’t pass by reference between programs)