

# Exercise 1

# Exercise 1

(a)

What is the output of the program for the following variant of `foo`?

```
int foo (int& a, int b) {  
    a += b;  
    return a;  
}
```

```
int main() {  
    int a = 0;  
    int b = 1;  
    for (int i=0; i<5; ++i) {  
        b = foo (a, b);  
        std::cout << b << " ";  
    }  
    return 0;  
}
```

# Exercise 1

(a)

What is the output of the program for the following variant of `foo`?

1 2 4 8 16

```
int foo (int& a, int b) {  
    a += b;  
    return a;  
}
```

```
int main() {  
    int a = 0;  
    int b = 1;  
    for (int i=0; i<5; ++i) {  
        b = foo (a, b);  
        std::cout << b << " ";  
    }  
    return 0;  
}
```

# Exercise 1

(b)

What is the output of the program for the following variant of `foo`?

```
int foo (int a, int b) {  
    a += b;  
    return a;  
}
```

```
int main() {  
    int a = 0;  
    int b = 1;  
    for (int i=0; i<5; ++i) {  
        b = foo (a, b);  
        std::cout << b << " ";  
    }  
    return 0;  
}
```

# Exercise 1

(b)

What is the output of the program for the following variant of `foo`?

1 1 1 1 1

```
int foo (int a, int b) {  
    a += b;  
    return a;  
}
```

```
int main() {  
    int a = 0;  
    int b = 1;  
    for (int i=0; i<5; ++i) {  
        b = foo (a, b);  
        std::cout << b << " ";  
    }  
    return 0;  
}
```

# Exercise 1

(c)

What is the output of the program for the following variant of `foo`?

```
int foo (int a, int& b) {  
    a += b;  
    return a;  
}
```

```
int main() {  
    int a = 0;  
    int b = 1;  
    for (int i=0; i<5; ++i) {  
        b = foo (a, b);  
        std::cout << b << " ";  
    }  
    return 0;  
}
```

# Exercise 1

(c)

What is the output of the program for the following variant of `foo`?

1 1 1 1 1

```
int foo (int a, int& b) {  
    a += b;  
    return a;  
}
```

```
int main() {  
    int a = 0;  
    int b = 1;  
    for (int i=0; i<5; ++i) {  
        b = foo (a, b);  
        std::cout << b << " ";  
    }  
    return 0;  
}
```