

CodeStepByStep (*)







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< polymorphismMystery1</pre>

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polymorphismMystery3 >


```
Language/Type:
                   C++ inheritance
polymorphism
Consider the following classes; assume that
each is defined in its own file.
class Computer : public Animal {
public:
    virtual void two() {
         cout << "C 2" << end1;
         Mineral::two();
    }
    virtual void three() {
         cout << "C 3" << endl;
    }
};
class Mineral : public Vegetable {
public:
    virtual void one() {
         cout << "M 1" << endl;</pre>
    }
    virtual void two() {
         cout << "M 2" << endl;
    }
}:
class Animal : public Mineral {
public:
    virtual void one() {
         cout << "A 1" << endl:
         two();
    }
    virtual void three() {
         cout << "A 3" << endl;
    }
};
```

```
class Vegetable {
public:
    virtual void two() {
        cout << "V 2" << endl;
    }
};
```

Now assume that the following variables are defined:

```
Vegetable* var1 = new Computer();
         var2 = new Animal();
Mineral*
Vegetable* var3 = new Vegetable();
Animal∗
          var4 = new Computer();
```

In the table below, indicate in the right-hand column the output produced by the statement in the left-hand column. If the statement produces more than one line of output, indicate the line breaks with slashes as in "x / y / z" to indicate three lines of output with "x" followed by "y" followed by "z". If the statement does not compile, write "COMPILER ERROR". If a statement would crash at runtime or cause unpredictable behavior, write "CRASH".

```
var1->one();
                                    COMPILER ERROR
var1->two();
                                    C 2 / M 2
var1->three();
                                    COMPILER ERROR
var2->one();
                                    A 1 / M 2
var2->two();
                                    M 2
var3->one();
                                    COMPILER ERROR
var3->two();
                                    V 2
var4->one();
                                    A 1 / C 2 / M 2
var4->three();
                                    C 3
((Animal*) var1)->one();
                                    A 1 / C 2 / M 2
((Mineral*) var1)->two();
                                    C 2 / M 2
((Computer*) var1)->three():
                                    C 3
((Vegetable*) var2)->three();
                                    COMPILER ERROR
((Animal*) var2)->one();
                                    A 1 / M 2
((Computer*) var4)->two();
                                    C 2 / M 2
```

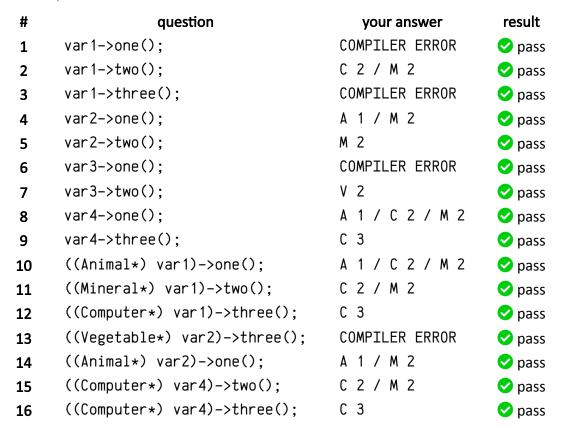
```
((Computer*) var4)->three();
```

C 3





✓ You passed 16 of 16 tests.



Need help?



Stuck on an exercise? Contact your TA or instructor.

If something seems wrong with our site, please contact us.

X