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Output of C++ Program | Set 3

Predict the output of below C++ programs.

Question 1

```
#include<iostream>


using namespace std;
class P {
public:
    void print()
    { cout <<" Inside P::"; }
};

class Q : public P {
public:
    void print()
    { cout <<" Inside Q"; }
};

class R: public Q {
};

int main(void)
{
    R r;

    r.print();
    return 0;
}
```

 Inside Q

Output:

Inside Q

The print function is not defined in class R. So it is looked up in the inheritance hierarchy. *print()* is present in both classes *P* and *Q*, which of them should be called? The idea is, if there is



Question 2

```
#include<iostream>
#include<stdio.h>

using namespace std;

class Base
{
public:
    Base()
    {
        fun(); //note: fun() is virtual
    }
    virtual void fun()
    {
        cout<<"\nBase Function";
    }
};

class Derived: public Base
{
public:
    Derived(){}
    virtual void fun()
    {
        cout<<"\nDerived Function";
    }
};

int main()
{
    Base* pBase = new Derived();
    delete pBase;
    return 0;
}
```



Base Function

Output:

Base Function

See following excerpt from [C++ standard](#) for explanation.

When a virtual function is called directly or indirectly from a constructor (including from the mem-initializer for a data member) or from a destructor, and the object to which the call applies is the object under construction or destruction, the function called is the one defined in the constructor or destructor's own class or in one of its bases, but not a function overriding it in a class derived from the constructor or destructor's class, or overriding it in one of the other base classes of the most derived object.



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2

3.2

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