Results

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1 question requires grading

37.5%

3
Out of 8 points

35:18
Time for this attempt

Your Answers:

1 0 / 0 points

Jag har läst hederskodex, samt reglerna ovan och kommer att följa dessa vid denna kontrollskrivning.

Du måste svara ja på denna fråga för att din kontrollskrivning ska bli bedömd.

- [x] Ja
- [ ] Nej

2 1 / 1 point

Classes that inherit from A1, must they implement f() in order to be instantiated?

```
struct A1 {
  virtual void f() = 0;
};
```

- [ ] No
- [x] Yes

3 1 / 1 point

Classes that inherit from A2, must they implement f() in order to be instantiated?

```
struct A2 {
  void f();
};
```

- [x] No
- [ ] Yes

4 1 / 1 point

The code below has two versions of *B*. The only difference are the keywords **virtual** and **override.** Does that make any difference in the resulting executable?

Assume compiling two program executables with c++11 and no optimization whatsoever is done by the compiler.

```
//#define VERSION_1    // uncomment for first version of B
struct A {
  virtual void f() = 0;
  int x;
};
#ifdef VERSION_1
struct B : A {
  virtual void f() override {}
};
#else
struct B : A {
  void f() {}
};
#endif

int main() {
  B b;
  A * p = &b;
```

```
  p->f();
}
```

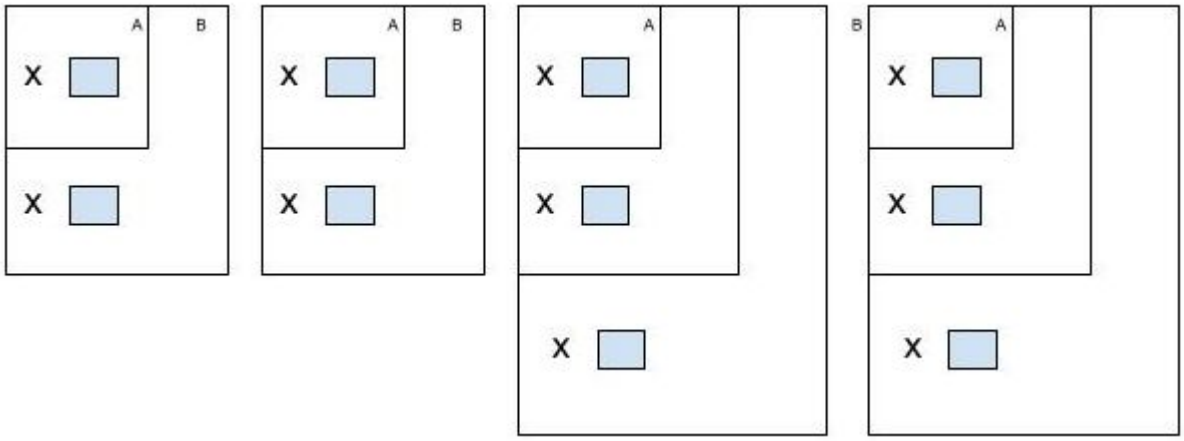
- [ ] Yes, the two executables would differ. One of them would not use a virtual table.
- [ ] Yes, the two executables would differ. B would override f() in one of the executables but not in the other.
- [x] No, the two executables would be the same.

5 0 / 2 points

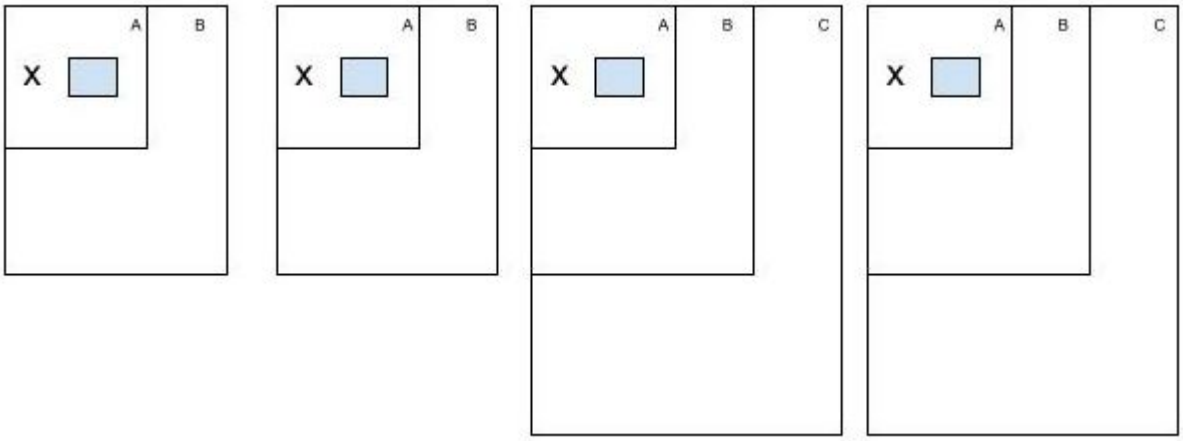
In the code below there are **three** class objects created during the lifetime of the executable: ***b, c, parameter***.
Which of the figures below best describes the objects in memory? Note that the objects are unnamed and unordered and the virtual table is not shown.

```
struct A {
  virtual void f() = 0;
  int x;
};

struct B : A {
  virtual void f() override {}
};

struct C : B {
  void f(B parameter) {}     // copy constructed
};

int main() {
  B b;
  C c;
  C & ref = c;

  c.f( ref );
}
```

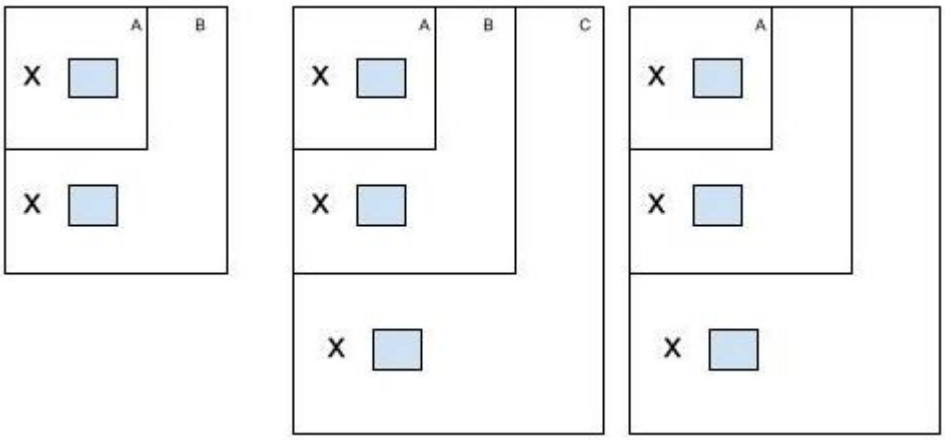
figur 1



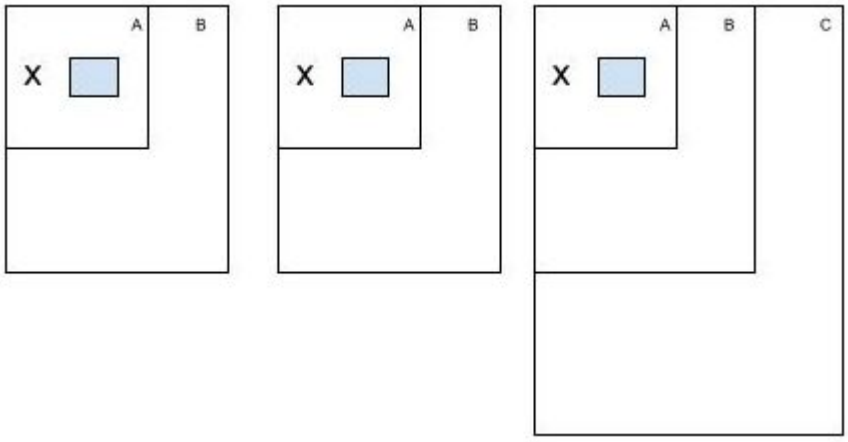
figur 2



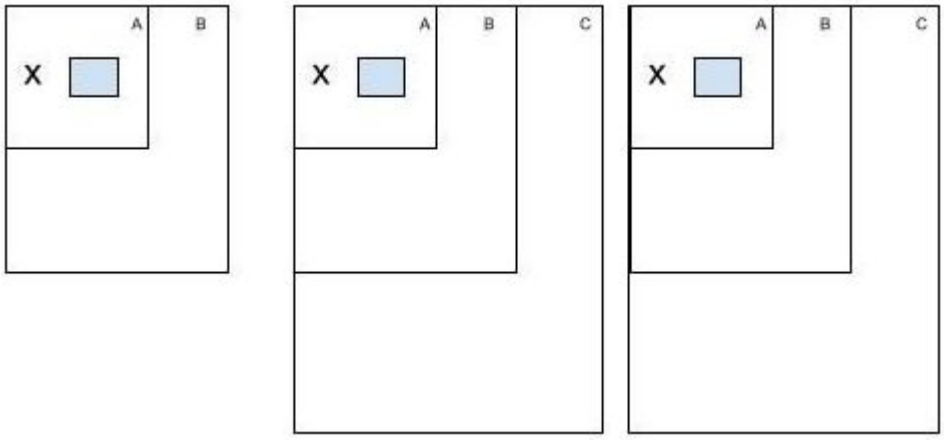
figur 3



figur 4



figur 5



- figure 1
- figure 2
- figure 3
- figure 4
- ✕ figure 5

Correct Answer: **figure 4**

6 0 / 3 points

Based on the code you can see below. What conclusions can you make? Note, some code are omitted (// ...).

```
//...

// Base classes
struct Baseone {
  virtual void run() {}
};

struct Basetwo {
  virtual void two() = 0;
};

// Derived classes
struct Done : Baseone {
  // ...
  virtual void run() override { }
};
```

```
struct Rtwo : Basetwo {
  // ...
  virtual void run() { }
};

struct Mult : Baseone, Basetwo {
  // ...
  virtual void two() {}
};
int main() {
  Done done;
  Rtwo R2;
  Mult mult;

  Baseone & ref_done = done;
  Basetwo & ref_R2   = R2;
  Basetwo & ref_mult = mult;

  ref_done.run();
  R2.run();
  mult.run();
}
```

- ✓ [x] Rtwo must implement *two()*
- [ ] Mult must implement *run()*
- [ ] No function calls are determined in runtime using dynamic binding.
- ✗ [ ] One function call is determined in runtime using dynamic binding

Missed Option - Incorrect

- ✗ [x] Two function calls is determined in runtime using dynamic binding

Selected Answer - Incorrect

- [ ] Three function calls is determined in runtime using dynamic binding

7 0 points possible

This is not a quiz question. It is an opportunity to comment on any of the quiz questions. You may leave it blank.

(no answer)

Waiting for grade