

1. Is the method properly overloaded?

```
1 class X
2 {
3     int method(int i, int d)
4     {
5         return i+d;
6     }
7
8     static int method(int i, double d)
9     {
10        return (int)(i+d);
11    }
12
13    double method(double i, int d)
14    {
15        return i+d;
16    }
17
18    static double method(double i, double d)
19    {
20        return i+d;
21    }
22 }
```

2. What is the output or outcome?

A)

```
1 class X
2 {
3     void method(int a)
4     {
5         System.out.println("ONE");
6     }
7
8     void method(double d)
9     {
10        System.out.println("TWO");
11    }
12 }
13
14 class Y extends X
15 {
16     @Override
17     void method(double d)
18     {
19         System.out.println("THREE");
20     }
21 }
22
23 public class MainClass
24 {
25     public static void main(String[] args)
26     {
27         new Y().method(100);
28     }
29 }
```

B)

```
1 class X
2 {
3     void calculate(int a, int b)
4     {
5         System.out.println("Class X");
6     }
7 }
8
9 class Y extends X
10 {
11     @Override
12     void calculate(int a, int b)
13     {
14         System.out.println("Class Y");
15     }
16 }
17
18 class Z extends Y
19 {
20     @Override
21     void calculate(int a, int b)
22     {
23         System.out.println("Class Z");
24     }
25 }
26
27 public class MainClass
28 {
29     public static void main(String[] args)
30     {
31         X x = new Y();
32         x.calculate(10, 20);
33
34         Y y = (Y) x;
35         y.calculate(50, 100);
36
37         Z z = (Z) y;
38         z.calculate(100, 200);
39     }
40 }
41
42 }
43 }
```

C)

```

1  class A
2  {
3      public A(int i)
4      {
5          System.out.println(1);
6      }
7
8      public A()
9      {
10         this(10);
11
12         System.out.println(2);
13     }
14
15     void A()
16     {
17         A(10);
18
19         System.out.println(3);
20     }
21
22     void A(int i)
23     {
24         System.out.println(4);
25     }
26 }
27
28
29 public class MainClass
30 {
31     public static void main(String[] args)
32     {
33         new A().A();
34     }
35 }

```

D)

```

1  class A
2  {
3      void myMethod(Object o, Double D)
4      {
5          System.out.println(1);
6      }
7
8      void myMethod(Integer I, Number N)
9      {
10         System.out.println(2);
11     }
12 }
13
14 class B extends A
15 {
16     void myMethod(Float F, Double D)
17     {
18         System.out.println(3);
19     }
20
21     void myMethod(Double D, Integer I)
22     {
23         System.out.println(4);
24     }
25 }
26
27 public class MainClass
28 {
29     public static void main(String[] args)
30     {
31         B b = new B();
32
33         b.myMethod(11.11, 0000);
34
35         b.myMethod(8778, 3223);
36
37         b.myMethod(2.3*1.2, 4.1*1.4);
38
39         b.myMethod((float)23.56, 21.45);
40     }
41 }

```

E)

```

1  class ABC
2  {
3      void methodABC()
4      {
5          new XYZ().methodXYZ();
6      }
7
8  }
9
10 class XYZ extends ABC
11 {
12     void methodXYZ()
13     {
14         methodABC();
15     }
16 }
17
18 public class MainClass
19 {
20     public static void main(String[] args)
21     {
22         new ABC().methodABC();
23     }
24 }

```

F)

```

1  class ABC
2  {
3      void methodABC()
4      {
5          System.out.println(111);
6      }
7
8      void methodABC(int i)
9      {
10         System.out.println(222);
11     }
12 }
13
14 class XYZ extends ABC
15 {
16     @Override
17     void methodABC(int i)
18     {
19         System.out.println(333);
20     }
21
22     @Override
23     void methodABC()
24     {
25         System.out.println(444);
26     }
27 }
28
29 public class MainClass
30 {
31     public static void main(String[] args)
32     {
33         ABC abc = new XYZ();
34
35         abc.methodABC(10);
36
37         abc.methodABC();
38     }
39 }

```