CPE 102 Pre-midterm Worksheet

Assume the following interfaces and classes exist, are correct, and have the relationships declared below:

```
public interface A                      {/*detail not shown*/}
public interface B                      {/*detail not shown*/}
public class C implements A             {/*detail not shown*/}
public class D implements A, B          {/*detail not shown*/}
public class E implements B             {/*detail not shown*/}
```

And the following references have been declared and initialized to something valid but not shown:

```
A a = new...;
B b = new...;
C c = new...;
D d = new...;
E e = new...;
```

And, among other things, that:

The interface ***B*** specifies the method **public void methodB()**
The class **C** implements the method **public void methodC()**
The class **D** implements the method **public void methodD(D other)**

Now, in the column to the right of each code fragment below, write **A, S,** or **DNC** as follows:

A if the fragment would ***always compile and*** run without exception.
S if the fragment would always compile ***but sometimes*** results in an exception at runtime.
DNC if the fragment ***does not compile***.

Code Fragment	A, S, or DNC?
`d.methodD((D)b);`	
`d = a;`	
`b = new E();`	
`b = (D)c;`	
`b.methodD(d);`	
`((D)b).methodD(d);`	
`a = c;`	
`b.methodB();`	
`b = new B();`	
`e.methodB();`	