Inheritance: MenuItem FRQ

The menu at a lunch counter includes a variety of sandwiches, salads, and drinks. The menu also allows a customer to create a "trio," which consists of three menu items: a sandwich, a salad, and a drink. The price of the trio is the sum of the two highest-priced menu items in the trio; one item with the lowest price is free.

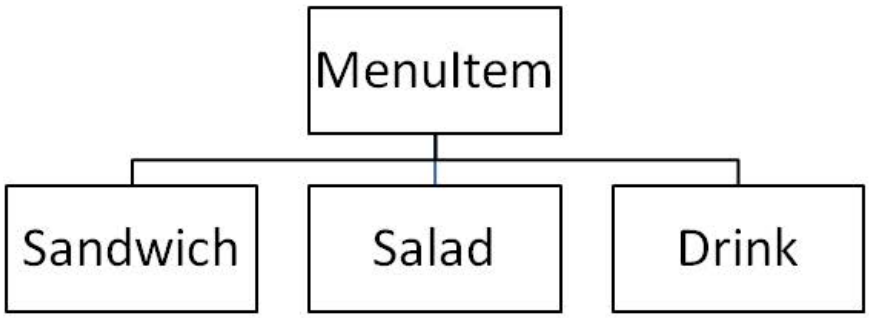
Each menu item has a name and a price. The three types of menu items are represented by the four classes `Sandwich`, `Salad`, and `Drink`. All three classes extend the following `MenuItem` class.

```
public class MenuItem
{
  // @return the name of the menu item
  public String getName()
  {  /* Implementation not shown. */  }

  // @return the price of the menu item
  public double getPrice()
  {  /* Implementation not shown. */  }

  /* There may be instance variables, constructors and methods that are
  not shown. */
}
```

The following diagram shows the relationship between the `MenuItem` class and the `Sandwich`, `Salad`, and `Drink` classes.



For example, assume that the menu includes the following items. The objects listed under each heading are instances of the class indicated by the heading.

Sandwich	Salad	Drink
"Cheeseburger" 2.75	"Spinach Salad" 1.25	"Orange Soda" 1.25
"Club Sandwich" 2.75	"Coleslaw" 1.25	"Cappuccino" 3.50

The menu allows customers to create a *Trio*, each of which includes a sandwich, a salad, and a drink. The name of the *Trio* consists of the names of the sandwich, salad, and drink, in that order, each separated by *"/"* and followed by a space and then *"Trio"*. The price of the *Trio* is the sum of the two highest-priced items in the *Trio*; one item with the lowest price is free.

A trio consisting of a cheeseburger, spinach salad, and an orange soda would have the name "*Cheeseburger/Spinach Salad/Orange Soda Trio*" and a price of $4.00 (the two highest prices are $2.75 and $1.25). Similarly, a trio consisting of a club sandwich, coleslaw, and a cappuccino would have the name "*Club Sandwich/Coleslaw/Cappuccino Trio*" and a price of $6.25 (the two highest prices are $2.75 and $3.50).

Write the *Trio* class. You must include a constructor that takes three parameters representing a sandwich, salad, and drink. The following code segment should have the indicated behavior.

```
Sandwich sandwich;
Salad salad;
Drink drink;
/* Code that initializes sandwich, salad, and drink */

Trio trio = new Trio(sandwich, salad, drink);  // Compiles without error
Trio trio1 = new Trio(salad, sandwich, drink); // Compile-time error
Trio trio2 = new Trio(sandwich, salad, salad); // Compile-time error
```

Write the complete *Trio* class below.