

**Question 1. (4 points)**

Push model

The signature of update()

```
public void update(int i);
```

implies that the new value (x or y coordinate) is pushed to the observer by the model. The observer does not have a reference to the model, so it would not be able to pull the data from the model.

**Question 2 (3 points)**

should always be applied with continuous testing  
should preserve the semantics of code  
eliminates code duplication and/or other code smells

See slides 6 and 8 from Refactoring.pdf.

**Question 3 (3 points)**

Replace Temp with Query

See slide 33 from Refactoring.pdf.