

**Problem 1.** Consider the class modeling letter grades, outlined below.

```
public class LetterGrade implements Comparable<LetterGrade>
{
    String grade = "F";

    public LetterGrade(String input)
    {
        // Check for validity, if valid store.
        // Valid grades are A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F
    }

    public boolean equals(LetterGrade that)
    {
        return this.equals(that);
    }

    public int compareTo(LetterGrade that)
    {
        // Return negative if this < that
        // Return positive if this > that
        // Return zero if this equals that
    }

    public static LetterGrade getGrade(double x)
    {
        // Convert the number into a letter grade according to
        // BASIS conversion criteria
    }
}
```

Complete this class by writing the constructor, the `compareTo` method, and the static `getGrade` method. Do not add any additional constructors.