11.2 Figure 11.12 contains the Java code for the scoring of points in a league. The league consists of three teams: teamA, teamB and teamC. A game involves two teams. There are three games in total; each team plays both of the others. A team scores 2 points if they win, 1 point if they draw and 0 if they lose.

a Draw a class diagram to model the classes and relationships in the code; your model should show attributes, methods and relationships.

b Draw a sequence diagram to model the sequence of messages in the execution of main(). Your answer should include constructors.

c What will be the output from main()?

Team class

```
class Team
{
        private String teamName; //team name
        private int score;       //score in a game
        private int points;      //cumulative points

        public Team(String tmName)      //constructor
        {
                teamName = new String(tmName); // populate attributes
                score = 0;
                points = 0;
        };

        public String getName()    //returns team's name
        {
                return teamName;
        };

        public void setScore(int inscore) //allocate score to team
        {
                score = inscore;
        };

        public int getScore() //returns score
        {
                return score;
        };

        public void addPoints(int inpoints) //adds points
        {
                points +=inpoints;
        };
```

Figure 11.12   Java code for Exercise 11.2