Athletes

Suppose we have the `Person`, `Athlete`, and `SoccerPlayer` classes defined below.

```
1   class Person {
2       void speakTo(Person other) { System.out.println("kudos"); }
3       void watch(SoccerPlayer other) { System.out.println("wow"); }
4   }
5
6   class Athlete extends Person {
7       void speakTo(Athlete other) { System.out.println("take notes"); }
8       void watch(Athlete other) { System.out.println("game on"); }
9   }
10
11  class SoccerPlayer extends Athlete {
12      void speakTo(Athlete other) { System.out.println("respect"); }
13      void speakTo(Person other) { System.out.println("hmph"); }
14  }
```

(a) For each line below, write what, if anything, is printed after its execution.
Write CE if there is a compiler error and RE if there is a runtime error. If a
line errors, continue executing the rest of the lines.

```
1   Person itai = new Person();
2
3   SoccerPlayer shivani = new Person();
4
5   Athlete sohum = new SoccerPlayer();
6
7   Person jack = new Athlete();
8
9   Athlete anjali = new Athlete();
10
11  SoccerPlayer chirasree = new SoccerPlayer();
12
13  itai.watch(chirasree);
14
15  jack.watch(sohum);
16
17  itai.speakTo(sohum);
18
19  jack.speakTo(anjali);
20
21  anjali.speakTo(chirasree);
22
23  sohum.speakTo(itai);
24
25  chirasree.speakTo((SoccerPlayer) sohum);
```

```
26
27   sohum.watch(itai);

28
29   sohum.watch((Athlete) itai);

30
31   ((Athlete) jack).speakTo(anjali);

32
33   ((SoccerPlayer) jack).speakTo(chirasree);

34
35   ((Person) chirasree).speakTo(itai);
```

(b) You may have noticed that `jack.watch(sohum)` produces a compile error. Interestingly, we can resolve this error by **adding casting**! List two fixes that would resolve this error. The first fix should print `wow`. The second fix should print `game on`. Each fix may cast either `jack` or `sohum`.

    1.

    2.

(c) Now let's try resolving as many of the remaining errors from above by **adding or removing casting**! For each error that can be resolved with casting, write the modified function call below. Note that you cannot resolve a compile error by creating a runtime error! Also note that not all, or any, of the errors may be resolved.