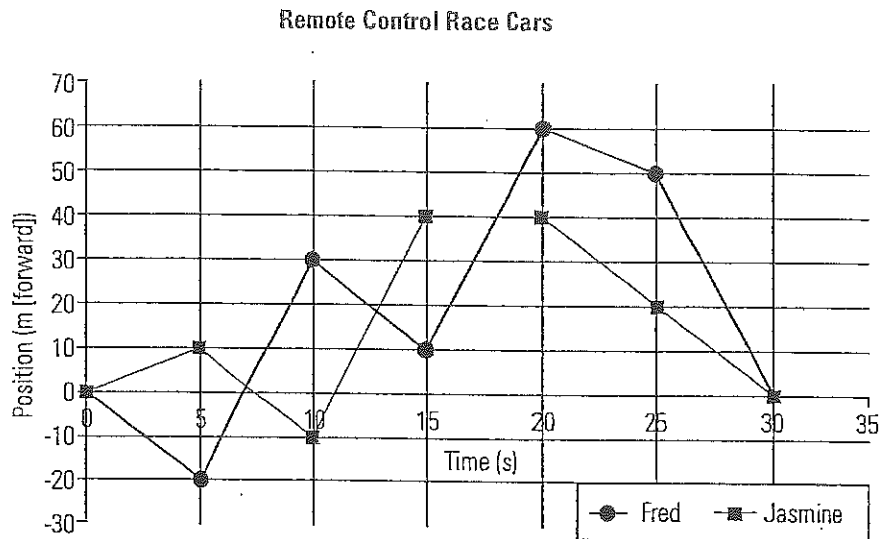


Blackline Master 12.1c

*Position–Time Graphs: Exercise*



Fred and Jasmine try out some new battery powered remote-controlled stunt cars on an unoccupied soccer field. They sit at one location (position = 0 m) and run their cars by choosing new direction and speed settings at 5 s intervals. Consider the forward direction to be positive.

The position–time graph above represents the cars' motions for the first half minute.

Use this graph to answer the following questions.

1. Determine the velocity, including direction, of each car from:

- (a) 0 s to 5 s
- (b) 15 s to 20 s
- (c) 25 s to 30 s

2. Describe when and where the cars are at the same position.

3. Find the total distance travelled by each car.

4. Calculate the average speed of each car from 0 s to 30 s.

5. Find the velocity for Jasmine between 5 and 20 secs

Find the velocity for Fred between 10 and 25 secs

