For each of the scenarios given below, calculate the distance and displacement for each moving object. Show your calculations on the back of this paper, and write your final answers in the boxes below.

|  |  |  |
| --- | --- | --- |
| Scenario | Distance (m) | Displacement (m) |
| 1. Jimmy throws a football 25 meters east to Pete, who then throws the ball 42 meters west past Pete to George. |  |  |
| 2. Amy strikes a field hockey ball 8 meters upfield to Krista, who then carries it 9 meters upfield, then hits it 18 meters downfield back to Amy. |  |  |
| 3. A crazy squirrel runs back and forth along a telephone line, running 4 meters, then -7 meters, then 2 meters, then -3 meters. |  |  |
| 4. Patty runs two times around a circular track that has a radius of 30 meters, ending up back where she started. |  |  |
| 5. A man gets off on the third floor of an elevator, but forgets his briefcase on the elevator. From that moment, the elevator goes up to the fifth floor, then down to the second floor, up to the ninth floor, then down to the first floor, when a security guard retrieves the briefcase. Assume each floor is 3 meters tall. |  |  |