The speed of a racket and the distance which a ball traveled in forehand and backhand smashes were measured in 17 men and 28 women table tennis players aged 10 to 22 years. Subjects performed ten trials for each kind of smash. The range of the speeds at impact with forehand and backhand smashes were 15.3 to 21.6 m sec\(^{-1}\) and 13.1 to 23.2 m sec\(^{-1}\) for men, and 13.9 to 20.7 m sec\(^{-1}\) and 11.3 to 20.2 m sec\(^{-1}\) for women. The range of the distance of the ball with forehand and backhand smashes were 7.6 to 11.3 m and 7.5 to 10.2 m for men, and 7.7 to 10.1 m and 6.4 to 9.5 m for women. The correlation coefficients (r=0.74 to 0.92) were statistically significant (p<0.05) between the racket speed and the ball distance. According to the regression equations, 1-meter increment of the ball distance corresponded to the increment of 3.8 to 4.8 m sec\(^{-1}\) of the racket speed. The results indicate that the racket speed can be estimated by measuring the ball-traveling distance of a ball travel.