I.11 A person drives from A to B at 30 miles per hour and then back without stopping. At what speed must he drive back to average 35 miles per hour (mph) for the trip?
(a) 40 mph (b) not possible (c) 50 mph (d) 42 mph
(e) 45 mph

III.30 In a race Jack ran 4/3 as fast as John, and finished in 1/9 hour less time. If Jack and John ran the same distance, how many minutes did it take Jack to run the race? (a) 15 (b) 20 (c) 27 (d) 36 (e) 42

IV.9 A man makes a trip by auto at an average speed of 40. In order that he have an average speed of 50 for the entire trip, what must be his average speed for the return trip over the same route? (a) 55 (b) 60 (c) 66 2/3 (d) 62 1/2 (e) depends on trip distance

IV.15 In a race Joe went twice as far as Bill, and at a rate of 10 feet per minute faster than Bill. If Bill took 6 minutes and Joe took 5 minutes for the race, what was the rate of Bill (to the nearest integer in feet per minute)?
(a) 3 (b) 5 (c) 7 (d) 8 (e) 9

V.15 Bill and Joe run a race of 1,000 feet at constant speeds. Bill starts 20 seconds ahead of Joe, and Joe passes Bill after 800 feet. If Bill runs the race in 2 minutes, how many minutes did it take Joe to run the race?
(a) 7/4 (b) 8/5 (c) 27/16 (d) 19/12 (e) 3/2

VI.11 A person drives from town A to town B at 30 mph, then back to A at 40 mph, and again from A to B at 50 mph. What is the average speed in mph for the three trips?
(a) 40 (b) 1800/47 (c) 79/2 (d) 2360/61 (e) depends on the distance from A to B.

VI.19 Bill and Tom run a race. Bill starts 100 feet behind Tom, runs 10/9 as fast as Tom, and they finish in a tie. How many feet did Bill run?
(a) 1000 (b) 1100 (c) 810 (d) 911 (e) cannot tell from the given information

VII.10 Tom and Bill together run a relay for a total of 4 miles. Bill runs at 6 mph and Tom at 8 mph. If Tom runs for twice as much time as Bill, for how many hours did Bill run? (a) 6/32 (b) 1/3 (c) 3/16 (d) 2/11 (e) 5/19

IX.17 John walked 3 times from town A to town B. His average speed for the first time was r mph (miles per hour); for the second time it was 2r mph, and for the third time it was 3r mph. His average speed im mph for the three trips was (a) 2r (b) 4r/3 (c) 11r/6 (d) 18r/11 (e) 7r/3

X.12 Tom and Bill each walked 5 miles. Tom walked 4/5 as fast as Bill and the sum of the walking times of Tom and Bill wa 2 hours. How fast, in miles per hour, did Bill walk?
(a) 45/8 (b) 53/10 (c) 28/5 (d) 6 (e) 101/16