

5. Dick bought articles at  $1\frac{1}{2}d.$  each and three times as many articles at  $7d.$  each. If he spent  $19s. 6d.$  more on the dearer articles, how much did he spend altogether?

6. On a certain bus journey, the conductor took 5 fourpenny fares for every 3 fivepenny fares and for every 6 three-halfpenny fares. If the total fares taken amounted to  $\text{£}1. 5s. 8d.$ , how many fivepenny fares were taken?

7. A man started from home at 9 a.m. and walked at 4 miles an hour till noon, when he rested for one hour. He returned home by the same route at 3 miles an hour. At what time in the morning did he pass the place which he passed at 1.20 p.m.?

8. 21 football teams entered a competition for a shield. Games were played every Saturday and no team played more than one game on the same day. Teams which lost their games did not play again in the competition. If no game resulted in a draw, how many games were played? How many teams did not play on the first Saturday of the competition if 16 teams were left in the competition at the end of the day?

9. Two motor cyclists,  $A$  and  $B$ , move round a circular track in opposite directions,  $A$  completing one lap in 20 minutes and  $B$  one lap in 30 minutes. At 10.30 a.m.  $A$  passes  $B$  and doubles his own speed 2 minutes later. At what time do the cyclists next pass?

# THE LIVERPOOL INSTITUTE

Margaret Bryce Smith Scholarships, 1954

## ARITHMETIC

### SECTION B

Time allowed— $1\frac{1}{4}$  Hours

Put your name and initials and your number on each sheet of paper which you use.

Remember to turn over.

1. A housewife spends 7s. on tea, dividing the money equally between tea at 5s. 4d. a pound and tea at 4s. a pound. How many ounces of tea did she buy?

2. A lorry and a cart are used for removing 247 cwt. of earth. The lorry holds  $2\frac{1}{2}$  times as much as the cart; the cart makes 2 journeys and the lorry makes 3 journeys. What weight of earth is removed by the lorry?

3. John gave Tom a camera in exchange for a football and 5 tennis balls. Later he exchanged the football for 11 tennis balls and 4s. 8d. If the camera was worth £2. 2s., what were 3 tennis balls worth?

4. What fraction of the whole area is shaded?

