4. Time required by first horse to go once round

$$= \frac{5280}{440} \text{ min.} = 12 \text{ min.}$$

Time required by second horse to go once round

$$= \frac{5280}{352} \text{ min.} = 15 \text{ min.}$$

Time required by third horse to go once round

$$= \frac{5280}{264} \text{ min.} = 20 \text{ min.}$$

Time required = L. C. M. of 12 min., 15 min., and 20 min. = 60 min.

5. Number = (L. C. M. of 675, 1050, and 4368) + 32
= 982800 + 32 = 982832.

III.—Page 50.

1. Resolve the number into its prime factors. Form as many series as there are different prime factors, making 1 the first term of each series; the first power of the prime factor the second term; the second power of that factor the third term, &c. Multiply these series together.

Prime factors of 8100 = 2, 2, 3, 3, 3, 3, 5 and 5.

1st series = 1, 2, 4.

2nd " = 1, 3, 9, 27, 81.

3rd " = 1, 5, 25.

1, 3, 9, 27, 81

1, 2, 4

1, 3, 9, 27, 81, 2, 6, 18, 54, 162, 4, 12, 36, 108, 324.

1, 5, 25

1, 3, 9, 27, 81, 2, 6, 18, 54, 162, 4, 12, 36, 108, 324.
5, 15, 45, 135, 405, 10, 30, 90, 270, 810, 20, 60, 180.
540, 1620, 25, 75, 225, 675, 2025, 50, 150.
450, 1350, 4050, 100, 300, 900, 2700, 8100.