6.

| | | | |
|---|---|---|---|
| 148, | 444, | 592, | 703. |
| 148, | 0, | 0, | 111. |
| 37, | | | 111. |

H. C. F. is 37.

## I.—Page 49.

1. Number = (L. C. M. of 13, 15 and 17) + 12.
$= 3315 + 12 = 3327.$

2. L. C. M. of 33, 27 and 30 = 2970.

$$\text{Number of times} = \frac{103950}{2970} = 35.$$

3. Length of rail = H. C. F. of 23023 ft. and 17765 ft. = 11 ft.

$$\text{Number of rails} = 6 \times \frac{2 \times 23023 + 2 \times 17765}{11}$$
$$= 44496.$$

4. Since H. C. F. of 210 and 330 = 30, ∴ 11 revolutions of small wheel = 7 revolutions of large one.

5. The prime factors of 2772 = 2, 2, 3, 3, 7 and 11. The required numbers must be divisible by 12, and have their L. C. M. $2 \times 2 \times 3 \times 3 \times 7 \times 11$.

∴ one number $= 12 \times 3 = 36$.
" a second $= 12 \times 7 = 84$.
" a third $= 12 \times 11 = 132$.

## II.

2. We must here find the 3 smallest and also the 3 largest numbers that will exactly divide 600.

The prime factors of 600 = 2, 2, 2, 3, 5 and 5.

∴ the 3 smallest bags must hold 1 bu., 2 bu., or 3 bu., and the 3 largest bins, 300 bu., 200 bu., or 150 bu.

3. The L. C. M. of 5, 22 and 75 $= 22 \times 75 = 1650$.

∴ smallest sum = $1650.