

The least common multiple of the numbers is 3000. The required number of acres is 3000, 600, 9000, &c. (4.) Arts. 53 and 56. (5.) 360. (6.) Art 38. (7.) The numbers, when resolved, are $2^6 \cdot 3 \cdot 13 \cdot 53$, $2^6 \cdot 3^2 \cdot 13 \cdot 43$, $2^3 \cdot 3 \cdot 13 \cdot 443$, and $2^6 \cdot 3^2 \cdot 13^2$: of which the G. C. M. is $2^3 \cdot 3 \cdot 13$, and the L. C. M. is $2^6 \cdot 3^2 \cdot 13^2 \cdot 43 \cdot 53 \cdot 443$. (8.) The prime factors of 1680 are $2^4 \cdot 3 \cdot 5 \cdot 7$; the four numbers are therefore 5, 6, 7 & 8. (9.) A would go *once round the island* in $600 \div 20 = 30$ days, B in $600 \div 30 = 20$ days, C in $600 \div 25 = 24$ days, and D in $600 \div 40 = 15$ days. By finding a *common multiple* of these, we shall have the time in which—after each one had gone several times round the island—all would be together again at the point from which they started. The least common multiple of 30, 20, 24 and 15 is 120; hence the travellers would come together in 120 days. (10.) 33 in each section—the G. C. M. of 132 and 99.

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(1.) 1400490. (2.) 80 ounces; 1 oz. gives $7\frac{2}{3}$ half sovereigns, \therefore 80 gives 623. (3.) 5554 oz. (=G. C. M. of the two quantities.) (5.) They stepped together 4440 times. The man took 8800 steps, the woman 13320, and the boy 17600. (6.) 84 seconds. (7.) The interval will be 62370 seconds. The four points will have moved over the distance 315, 125, 70, 54 respectively. (8.) 9 classes of boys and 8 classes of girls. (9.) 6 rods. (10.) 7113120 days, when the first will have made 81760 revolutions in its orbit; the second, 31755; and the third, 19488.

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(2.) 247. (3.) They will do the same quantity in