

Worksheet (Revision)

1. In a 3-digit number, the tens digit is thrice the unit digit and the hundred digit is four times the unit digit. Also, the sum of digits is 16. Find the number.
2. The sum of digits of a 2-digit number is 15. The number obtained by interchanging its digits exceeds the given number by 9. Find the original number.
3. Write algebraic expression for:
 - (i) A number which leaves a remainder 2 when divided by 4.
 - (ii) A number which leaves a remainder 3 when divided by 7.
4. Find the remainder:
 - (i) $9x + 8$ divided by 3
 - (ii) $7p - 2$ divided by 7
 - (iii) $(11n - 25)$ divided by 11
5. If $4xy7$ is exactly divisible by 3, then find the least value of $(x + y)$.
6. Find the digital root of $45x + 9y + 11$.
7. Write the parity of: $94 + 95 - 96 + 97 - 98 + 99$
8. If $6m926n$ is a multiple of 15, then list all possible pairs of m and n .
9. A number when divided by 5 leaves remainder 2. What is the remainder when the square of the same number is divided by 5?
10. Three numbers are in ratio $2 : 3 : 5$. The sum of their squares is 608. Find the numbers.
11. A mixture of 40 kg contains sand and cement in ratio $3 : 1$. How much cement should be added to the mixture so that the ratio of sand to cement becomes $5 : 2$?
12. $A : B = 5 : 9$, $B : C = 4 : 5$. Find $A : B : C$.
13. The ratio of monthly income to savings of a family is $11 : 2$. If the savings is ₹ 2500, find the monthly income and expenditure of the family.
14. The present ages of X and Y are in ratio $8 : 3$. Six years later, their age ratio will be $9 : 4$. Find their present ages.
15. PQRS is a parallelogram (as shown below). Find x, y . Also find all the angles.
 $\angle P = 3x + 30^\circ$, $\angle Q = 3y + 15^\circ$, $\angle R = 6x - 15^\circ$
16. Simplify:
$$\left([4^{m+1/4} \times \sqrt{(2 \times 2^m)}] / [2 \times \sqrt{(2^{-m})}] \right)^{1/m}$$

