SUCCESS INSTITUTE Assignment - 12 10th Class Expert

Q1. p and q are two consecutive natural numbers , then HCF (p, q) is Ans. 1

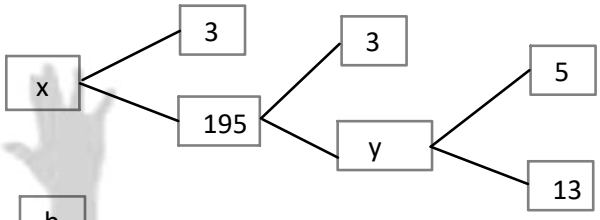
Q2. p and q are two consecutive natural numbers , then LCM (p, q) is Ans. p q

Q3. What is a prime number ? Write one even prime number. Write smallest prime number.

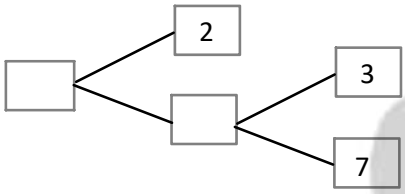
Q4. What is a composite number ? Write smallest composite number.

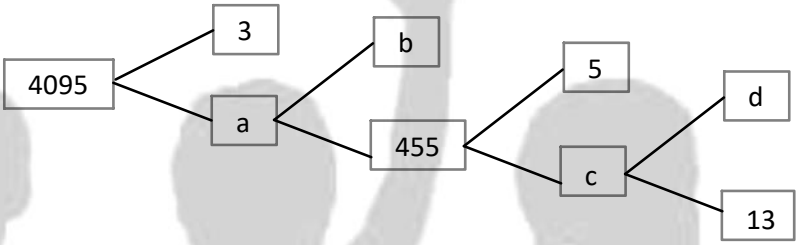
Q5. State Fundamental Theorem of Arithmetic.

Q6. Make factor tree of the following :
(i) 140 (ii) 156 (iii) 234 (iv) 1176 (v) 32760



Q7. Write the missing numbers in the factor tree.





Q8. If two positive integers a and b are expressed as $a = x^3y^2$ *and* $b = xy^3$ *where a and b being prime numbers*, then LCM (a,b) *and HCF* (a, b) *is equal to* *Ans.* x^3y^3 *and* xy^2

Q9. If two positive integers a and b are expressed as $a = x\ y^2\ z^3$ *and* $b = x^3\ y^2\ z$ *where a and b being prime numbers*, then LCM (a,b) *and HCF* (a, b) *is equal to* *Ans.* $x^3y^2z^3$ *and* xy^2z

Q10. If the HCF of 120 and 130 can be expressed in the form $3x + 4$, find x . *Ans.* $x = 2$

Q11. If the HCF of 144 and 180 can be expressed in the form $13m - 3$, find m . *Ans.* $m = 3$

Q12. If the HCF (225 ,60) = 225 x 5 $-10x$, *then* $x =$ *Ans.* 111

Q13. If the HCF (210 ,55) = 210 x 5 $+ 55y$, *then* $y =$ *Ans.* -19

Q14. Find the largest positive integer that will divide 122, 150 and 115 leaving remainders 5, 7, 11 respectively.
Ans. 13

Q15. Find the greatest number that will divide 445, 572 and 699 leaving remainders 4, 5, 6 respectively.
Ans. 63

Q16. Find the largest positive number that will divide 626, 3127 and 15628 leaving remainders 1, 2, 3 respectively.
Ans. 625

Q17. There is a circular path around a sports field. Sonia takes 18 minutes to drive one round of the field, while Ravi takes 12 minutes for the same. Suppose they both start at the same point and at the same time and go in the same direction. After how many minutes will they meet again at the starting point ? Ans. 36 minutes

Q18. In a school there are two sections - A and B of class X. There are 32 students in section A and 36 students in section B. Determine the minimum number of books required for their class library so that they can be distributed equally among students of section A or section B. Ans. 288

Q19. In a morning walk three persons steps off together , their steps measures 80 cm, 85 cm and 90 cm respectively. What is the minimum distance each should walk so that he can cover the distance in complete steps. Ans. 12240 cm