MATHS

BOOKS - SWAN PUBLICATION

PLAYING WITH NUMBERS

Exercise 3 1

1. Write down all the factors of each of the following:

18

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2. Write down all the factors of each of the following:

24

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3. Write down all the factors of each of the following:

45

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4. Write down all the factors of each of the following:

60

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5. Write down all the factors of each of the following:

65

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6. Write down the first six multiples of each of the following :

6

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7. Write down the first six multiples of each of the following :

9

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8. Write the first five multiples of :

11

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9. Write down the first six multiples of each of the following :

15

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10. Write down the first six multiples of each of the following :

24

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11. List all the numbers less than 100 that are multiples : 17

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12. List all the numbers less than 100 that are multiples : 12

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13. Write all the numbers less than 100 which are common multples of3 and 4.

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14. Write of the following are prime numbers:

39

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15. Write of the following are prime numbers:

129

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16. Write of the following are prime numbers:

177

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17. Write of the following are prime numbers:

203

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18. Write of the following are prime numbers:

237

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19. Write of the following are prime numbers:

361

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20. Express each of the following as sum of two odd prime numbers: 16

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21. Express each of the following numbers as a sum of two odd primes :

36

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22. Express each of the following as sum of two odd prime numbers: 40

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23. Write all the prime numbers between the given numbers:

1 to 25

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24. Write all the prime numbers between the given numbers:

85 to 105

25. Write all the prime numbers between the given numbers:

120 to 140

26. Is 36 a perfect number?

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27. Find the missing factors:

$5 \times \ldots\ldots\ldots\ldots = 30$

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28. Find the missing factors:

$\ldots\ldots\ldots\ldots \times 6 = 48$

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29. Find the missing factors:

$7 \times \ldots\ldots\ldots\ldots = 63$

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30. Find the missing factors:

$\ldots\ldots\ldots\ldots \times 8 = 104$

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31. Find the missing factors:

$\ldots\ldots\ldots\ldots \times 7 = 105$

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32. List all 2-digit prime numbers, in which both the digits are prime numbers.

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Exercise 3 2

1. Find the common factors of the followings:

16 and 24

2. Find the common factors of the followings:

25 and 40

3. Find the common factors of the followings:

24 and 36

4. Find the common factors of the followings:

14, 35 and 42

5. Find the common factors of the followings:

16 and 24

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6. Find first three common multiples of

3 and 4

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7. Find first three common multiples of:

6 and 8.

8. Find first three common multiples of the followings:

2,3 and 4

9. Which of the following numbers are divisible by 2 or 4?

52314

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10. Which of the following numbers are divisible by 2 or 4?

52314

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11. Which of the following numbers are divisible by 2 or 4?

4056784

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12. Which of the following numbers are divisible by 2 or 4?

21536

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13. Which of the following numbers are divisible by 2 or 4?

412318

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14. Which of the following numbers are divisible by 3 or 9?

654312

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15. Which of the following numbers are divisible by 3 or 9?

516735

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16. Which of the following numbers are divisible by 3 or 9?

423152

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17. Which of the following numbers are divisible by 3 or 9?

704355

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18. Which of the following numbers are divisible by 3 or 9?

215478

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19. Which of the following numbers are divisible by 5 or 10?

456803

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20. Which of the following numbers are divisible by 5 or 10?

654130

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21. Which of the following numbers are divisible by 5 or 10?

256785

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22. Which of the following numbers are divisible by 5 or 10?

412508

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23. Which of the following numbers are divisible by 5 or 10?

872565

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24. Which of the following numbers are divisible by 8

457432

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25. Which of the following numbers are divisible by 8

5134214

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26. Which of the following numbers are divisible by 8

7232000

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27. Which of the following numbers are divisible by 8

5124328

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28. Which of the following numbers are divisible by 8

642516

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29. Which of the following numbers are divisible by 6?

425424

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30. Which of the following numbers are divisible by 6?

617415

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31. Which of the following numbers are divisible by 6?

3415026

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32. Which of the following numbers are divisible by 6?

4065842

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33. Which of the following numbers are divisible by 6?

725436

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34. Which of the following numbers are divisible by 11?

4281970

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35. Which of the following numbers are divisible by 11?

8049536

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36. Which of the following numbers are divisible by 11?

1234321

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37. Which of the following numbers are divisible by 11?

6450828

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38. Which of the following numbers are divisible by 11?

5648346

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39. State True or False.

If a number is divisible by 24, then it is also divisible by 3 and 8.

40. State True or False.

60 and 90 both are divisible by 10 then after sum is not divisible by 10.

41. State True or False.

If a number is divisible by 8 then it is also divisible by 16.

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42. State True or False.

If a number is divisible by 15 then it is also divisible by 3.

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43. State True or False.

144 and 72 are divisible by 12 then their difference is also divisible by 12.

44. A number is divisible by both 5 and 12.By which other number will that number be always divisible?

45. Which of the following pairs are co prime?

25,35

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46. Which of the following pairs are co prime?

16, 21

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47. Which of the following pairs are co prime?

24, 41

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48. Which of the following pairs are co prime?

48, 33

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49. Which of the following pairs are co prime?

20, 57

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Exercise 3 3

1. Find prime factors of the following numbers by factor tree method:

96

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2. Find prime factors of the following numbers by factor tree method:

120

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3. Find prime factors of the following numbers by factor tree method:

180

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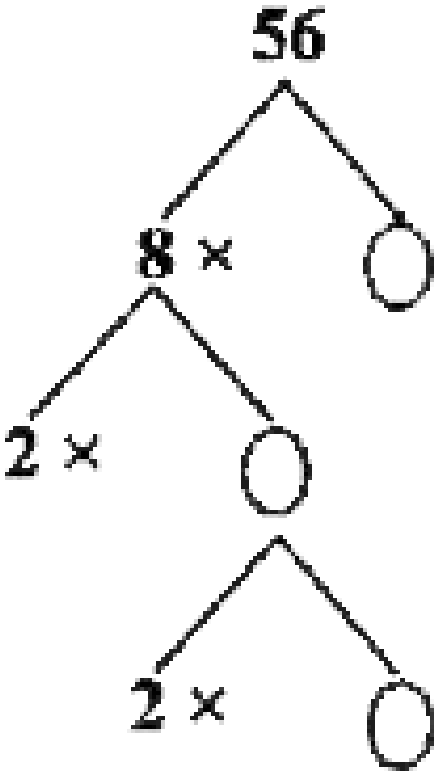
4. Complete each factor tree:



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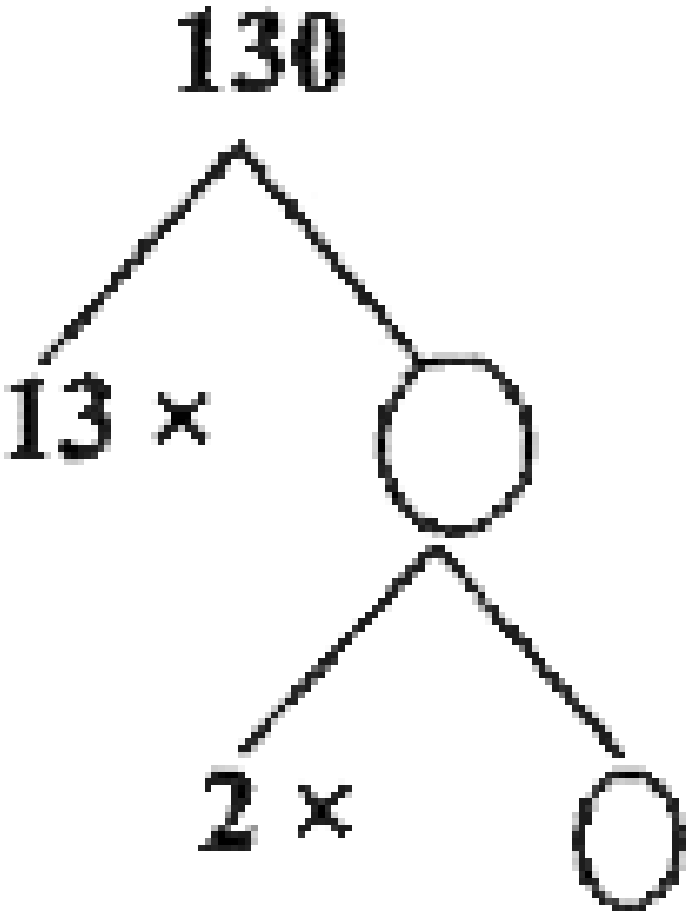
5. Complete each factor tree:



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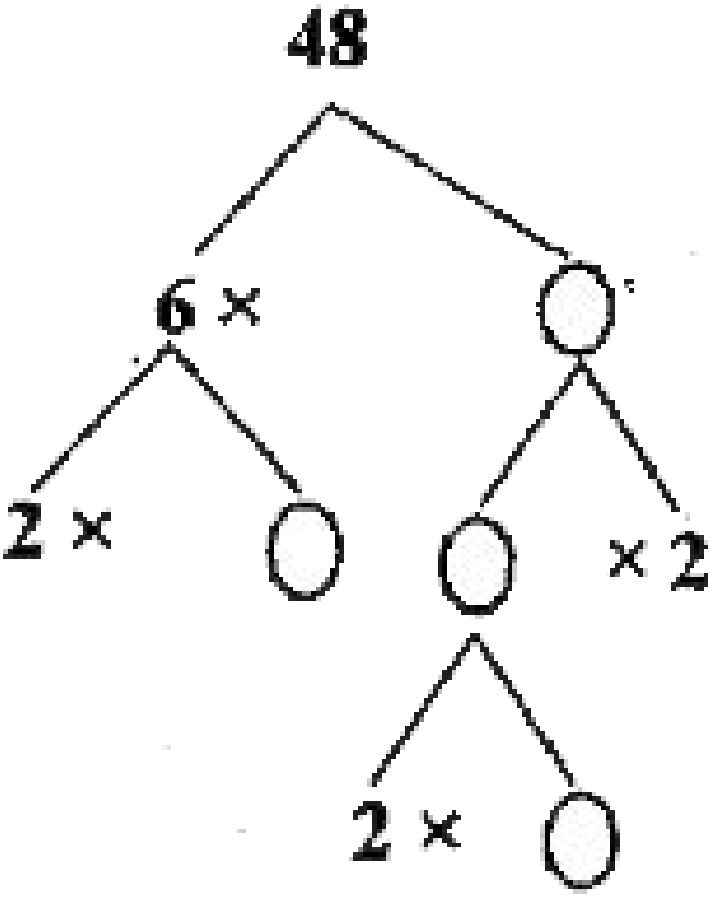
6. Complete each factor tree:



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7. Find the prime factors of the following numbers by division method: 420

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8. Find the prime factors of the following numbers by division method: 980

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9. Find the prime factors of the following numbers by division method: 225

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10. Find the prime factors of the following numbers by division method: 150

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11. Find the prime factors of the following numbers by division method: 324

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Exercise 3 4

1. Find HCF of the following numbers by prime factorisdation: 30,42

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2. Find HCF of the following numbers by prime factorisdation: 135, 225

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3. Find HCF of the following numbers by prime factorisdation: 180,192

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4. Find HCF of the following numbers by prime factorisdation: 49, 91, 175

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5. Find HCF of the following numbers by prime factorisdation: 144, 252, 630

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6. Find HCF of the following numbers using division method:

170,238

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7. Find HCF of the following numbers using division method:

54, 144

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8. Find HCF of the following numbers using division method:

72, 88

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9. Find HCF of the following numbers using division method:

96,240,336

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10. Find HCF of the following numbers using division method:

170,238

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11. Find:

HCF of two distinct prime numbers.

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12. What is the H.C.F of two consecutive even numbers?

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13. What is the H.C.F of two consecutive numbers?

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14. What is the H.C.F of two consecutive odd numbers?

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15. Find the greatest number which divides 245 and 1029 leaving a remainder 5 in each case.

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16. Find the greatest number that can divide 782 and 460 leaving remainder 2 and 5 respectively.

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17. Find the greatest number that can divide 782 and 460 leaving remainder 2 and 5 respectively.

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18. Two different containers contain 529 litres and 667 lites of milk respectively. Find the maximum capacity of container which can measure the milk of both containers in exact number of times.

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19. There are 136 apples, 170 mangoes and 255 oranges. These are to be packed in boxes containing the same number of fruits. Find the greatest number of fruits possible in each box.

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20. Three pieces of timber 54m, 36m and 24 m log have to be divided into planks of the same length. What is the greatest possible length of each plank?

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21. A room measurs 4.8 m and 5.04 m. Find the size of the largest square tile that can be used

ot tile the floor without cutting any tile.

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22. Reduce each of the following fractions to lowest forms:

$$\frac{85}{102}$$

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23. Reduce each of the following fractions to lowest forms:

$\frac{52}{130}$

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24. Reduce each of the following fractions to lowest forms:

$\frac{289}{391}$

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Exercise 3 5

1. Find the LCM of following numbers by prime factorization method: 45, 60

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2. Find the LCM of following numbers by prime factorization method: 52, 56

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3. Find the LCM of following numbers by prime factorization method: 96, 360

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4. Find the LCM of following numbers by prime factorization method: 96, 360

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5. Find the LCM of following numbers by prime factorization method: 45, 60

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6. Find LCM of the following by common division method:

24, 64

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7. Find LCM of the following by common division method:

42, 63

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8. Find LCM of the following by common division method:

24, 64

Watch Video Solution

9. Find LCM of the following by common division method:

42, 63

Watch Video Solution

10. Find LCM of the following by common division method:

42, 63

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11. Find the smallest square number which is divisible by each of the numbers 6, 9 and 15.

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12. Find the least number when divided by 10,12 and 15 leaves remainder 7 in each case.

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13. Find the greatest 4-digit number exactly divisible by 12, 18 and 30.

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14. Find the smallest 4-digit number exactly divisible by 15, 24 and 36.

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15. Four bells toll at intervals of 8,9,12 and 15 minutes respectively. If they toll together at 1.00 PM. When will they toll together next?

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16. Three boys step of together from the same spot their steps measures 56cm, and 63 cm respectively. At what distance from the starting point will they again step together?

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17. Can two numbers have 15 as their HCF and 175 as LCM Why?

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18. Can two numbers have 12 as their HCF and 72 as their LCM . Give reasons in support of your answer.

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19. The HCF and LCM of two numbers are 13 and 182 respectively. If one of the numbers is 26. Find other number.

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20. The LCM of two co prime number is 195. If one number is 15 then find the other number.

21. The HCF of two numbers is 6 and product of two numbers is 216. Find their LCM.

Multiple Choice Questions

1. Which of the following is a factor of every number

A. 0

B. 1

C. 2

D. 3

Answer: B

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2. How many even numbers are prime?

A. 1

B. 2

C. 3

D. 4

Answer: A

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3. The smallest composite number is _____

A. 1

B. 2

C. 3

D. 4

Answer: D

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4. Which of the following number is a perfect number?

A. 8

B. 6

C. 12

D. 18

Answer: B

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5. Which of the following is not a multiple of 7?

A. 35

B. 48

C. 56

D. 91

Answer: B

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6. Which of the followng is not a factor of 36?

A. 12

B. 6

C. 9

D. 8

Answer: D

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7. The number of prime numbers upto 25 ar:

A. 9

B. 10

C. 8

D. 12

Answer: A

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8. Which mathematician gave the method to find prime and composite numbers?

A. Aryabhatta

B. Ramayan

C. Eratosthenes

D. Goldbach

Answer: C

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9. The statement Every even number greater than 4 can be expressed as the sum of two odd prime numbers is given by?

A. Goldbach

B. Eratosthenes

C. Aryabhatta

D. Ramanujan

Answer: A

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10. Which of the following is a prime number?

A. 221

B. 195

C. 97

D. 111

Answer: C

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11. Which of the following number is divisible by 4?

A. 52369

B. 25746

C. 21564

D. 83426

Answer: C

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12. Which of the followng is not true?

A. If a number is factor of two numbers thenit also factor of their sum.

B. If a number is factor of two numbers then it is also factor of their difference.

C. 15 and 24 are co prime to each other.

D. 1 is neither prime nor composite.

Answer: C


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13. Which of the following pair is co prime?

A. (12,25)

B. (18,27)

C. (25,35)

D. (21,56)

Answer: A

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14. Which of the following number is divisible by 8?

A. 123568

B. 412580

C. 258124

D. 453230

Answer: A

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15. Prime factorisation of 84?

A. $2 \times 2 \times 2 \times 7$

B. $7 \times 2 \times 3 \times 3$

C. $2 \times 3 \times 7 \times 2$

D. $3 \times 2 \times 3 \times 2 \times 7$

Answer: C

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16. HCF of 25 and 45 is

A. 15

B. 5

C. 225

D. 135

Answer: B

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17. If LCM of two numbers is 36 then which of the following can not be their HCF?

A. 9

B. 12

C. 8

D. 18

Answer: C

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18. The LCM of two co prime number is 195. If one number is 15 then find the other number.

A. 132

B. 154

C. 18

D. 13

Answer: D

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19. Find the greatest number which divides 145 and 235 leaving the remainder 1 in each case.

A. 24

B. 18

C. 19

D. 17

Answer: B

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20. The greatest 4 digit number which is divisible by 12, 15 and 20.

A. 9990

B. 9000

C. 9960

D. 9999

Answer: C

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