**LCM and HCF**

**1.**  Which one is the largest fraction among 5/7, 7/9 and 11/13?

**(A)** 5/7 **(B)** 7/9

**(C)** 11/13 **(D)** All are equal

**2.**  What is the Highest Common Factor of 24, 40 and 120?

**(A)** 8 **(B)** 4

**(C)** 12 **(D)** 40

**3.**  What is the LCM of 18/5 and 20/9?

**(A)** 60 **(B)** 12

**(C)** 30 **(D)** 180

**4.**  Which fraction among 3/7, 4/11 and 5/8 is the smallest?

**(A)** 3/7 **(B)** 4/11

**(C)** 5/8 **(D)** All are equal

**5.**  What is the Highest Common Factor of 3/4 and 12/13?

**(A)** 3/13 **(B)** 3/52

**(C)** 3/26 **(D)** 3/41

**6.**  Which fraction among 3/11, 4/7 and 5/8 is the smallest?

**(A)** 3/11 **(B)** 4/7

**(C)** 5/8 **(D)** All are equal

**7.**  Which of the following is true?

**(A) (B)**

**(C) (D)**

**8.** What is the least common multiple of 24, 48 and 72?

**(A)** 72 **(B)** 144

**(C)** 288 **(D)** 216

**9.**  What is the LCM of 64 and 56?

**(A)** 448 **(B)** 488

**(C)** 484 **(D)** 408

**10.** What is the HCF of 6345 and 2160?

**(A)** 45 **(B)** 135

**(C)** 270 **(D)** 15

**11.** What is the LCM of 120 and 450?

**(A)** 2400 **(B)** 1800

**(C)** 3600 **(D)** 4800

**12.** What is the HCF of 23 × 34 and 25 × 32?

**(A)** 25 × 33 **(B)** 23 × 34

**(C)** 23 × 32 **(D)** 25 × 34

**13.** A is The highest common factor of and ,and least common multiple of and is B , then what is the value of A + B?

**(A)** **(B)**

**(C)** **(D)**

**14.** What is the maximum common factor (HCF) of and ?

**(A)** **(B)**

**(C)** **(D)**

**15.** What is the Least Common Multiple of all even numbers between 5 and 13?

**(A)** 120 **(B)** 90

**(C)** 180 **(D)** 60

**16.** If the Least Common Multiple of 56, 57 and 58 is K, then what will be the Least Common Multiple of 56, 57, 58 and 59?

**(A)** 177 K **(B)** 59 K

**(C)** 56 K **(D)** 57 K

**17.** If Least Common Multiple of 23 and 24 is A and Highest Common Factor of 23 and 24 is B, then what is the value of A + B?

**(A)** 451 **(B)** 551

**(C)** 553 **(D)** 452

**18.** What is the Highest Common Factor of 42, 168 and 210?

**(A)** 14 **(B)** 21

**(C)** 42 **(D)** 7

**19.** The product of two numbers is 6845, if the HCF of the number is 37, then the greater number is:

**(A)** 111 **(B)** 37

**(C)** 148 **(D)** 185

**20.** If x × y denotes HCF of x and y and x @ y denotes LCM of x and y, then the value of (72 × 84) @ 144 is:

**(A)** 144 **(B)** 504

**(C)** 210 **(D)** 420

**Solution**

**1.**  **Answer: (C)**

So, 11/13 is the largest fraction

Also we can solve it by equating the bases of these fractions.

LCM of 7, 9 & 13 = 819

Here also we can see 693/819 i.e. 11/13 is the largest fraction

**2.**  **Answer: (A)**

HCF of 24, 40 & 120

24 = 2 × 2 × 2 × 3 = 23 × 31

40 = 2 × 2 × 2 × 5 = 23 × 51

120 = 2 × 2 × 2 × 3 × 5 = 23 × 31 × 51

So, HCF = 23 = 8 (since that is common in all the numbers)

**3.**  **Answer: (D)**

For finding the LCM of 2 fractions.

LCM =LCM of Numerators/HCF of Denominators

LCM = LCM of 18&20/HCF of 5&9=180/1=180

**4.**  **Answer: (B)**

3/7=0.4284,4/11=0.3636,5/8=0.625

So smallest is 4/11

It can also be solved by making the denominators equal

LCM of 7, 11 & 8 = 616

When, based are equal, we can clearly see.

224/616 is the smallest i.e. 4/11

**5.**  **Answer: (B)**

For fraction,

H.C.F = H.C.F of numerator/L.C.M of denominator

Numerators are 3 and 12

H.C.F of 3 and 12 = 3

Denominators are 4 and 13

L.C.M of 4 and 13 = 52

H.C.F = 3/52

**6.**  **Answer: (A)**

3/11 = 0.27

4/7 = 0.57

5/8 = 0.625

We can observe that 3/11 has the minimum value.

∴ 3/11 is the smallest fraction among all

**7.**  **Answer: (A)**

6/7 = 0.85

4/5 = 0.8

3/4 = 0.75

Here, 0.85 > 0.8 > 0.75

Hence, 6/7 > 4/5 > 3/4 is true.

**8.**  **Answer: (B)**

Listing the prime factor of each number

24 = 2 × 2 × 2 × 3

48 = 2 × 2 × 2 × 2 × 3

72 = 2 × 2 × 2 × 3 × 3

Multiply each factor the greatest number of times it occurs in any of the numbers.

48 has 4 2s, 72 has 2 3s. This gives us 144, the smallest number that can be divided evenly by 24, 48 and 72

**9. Answer: (A)**

**Table

Description automatically generated**

Required LCM = 2 × 2 × 2 × 8 × 7 = 448

**10. Answer: (B)**

HCF of 6345 and 2160

Factors of 6345 = 5 × 3 × 3 × 3 × 47

Factors of 2160 = 5 × 3 × 3 × 3 × 2 × 2 × 2 × 2

So , common factors = 5 × 3 × 3 × 3

= 135

**11. Answer: (B)**

**Table

Description automatically generated**

LCM = 5 × 2 × 3 × 3 × 4 × 5 = 1800

**12. Answer: (C)**

A = 23 × 34

B = 25 × 32

HCF of (A, B) = 23 × 32

**13. Answer: (C)**

A =

=

B =

=

So, A + B =

=

=

**14. Answer: (D)**

HCF of

HFC =

HCF =

**15.**  **Answer: (A)**

Even number between 5 and 13 -: 6, 8, 10, 12

LCM (6, 8, 10, 12) = 120

**16.**  **Answer: (B)**

LCM (56, 57, 58) = K

LCM (56, 57, 58, 59)

= 

LCM (56, 57, 58, 59) = 59K

**17.**  **Answer: (C)**

LCM (23, 24) = 552

A = 552

HCF (23, 24) = 1

B = 1

A.T.Q

= A + B

= 552 + 1

= 553

**18.**  **Answer: (C)**

H.C.F (42, 168, 210)

42 = 21 × 2

168 = 21 × 2 × 2 × 2

210 = 21 × 2 × 5

HCF (42, 168, 210) = 42

**19.**  **Answer: (D)**

Let the number are x and y

37xy = 6845

xy = 185

xy = 37 × 5

1st Number = 185

2nd Number = 37

**20.**  **Answer: (A)**

A.T.Q

(72 × 84) @ 144

HCF of 72 and 84 = 12

12 @ 144

LCM of 12 and 144 = 144

12 @ 144 = 144