Review Exercise Set 11

Exercise 1: Find the LCM of the following numbers.

6 and 15

Exercise 2: Find the LCM of the following numbers.

16 and 24

Exercise 3: Find the LCM of the following numbers.

9, 15, and 20

Exercise 4: Find the GCF of the following numbers.

18 and 42

Exercise 5: Find the GCF of the following numbers.

16 and 28

Exercise 6: Find the GCF of the following numbers.

24, 36, and 60

Review Exercise Set 11 Answer Key

Exercise 1: Find the LCM of the following numbers.

6 and 15

Factorization of 6: 2 * 3
Factorization of 15: 3 * 5

LCM: 3 * 2 * 5 = 30

Multiply the highest power of each prime factor (indicated in red text). The product of these factors will be the LCM.

Exercise 2: Find the LCM of the following numbers.

16 and 24

Factorization of 16: 2 * 2 * 2 * 2 = 2^4
Factorization of 24: 2 * 2 * 2 * 3 = 2^3 * 3

LCM: 2^4 * 3 = 2 * 2 * 2 * 2 * 3 = 48

Exercise 3: Find the LCM of the following numbers.

9, 15, and 20

Factorization of 9: 3 * 3 = 3^2
Factorization of 15: 3 * 5
Factorization of 20: 2 * 2 * 5 = 2^2 * 5

LCM: 3^2 * 2^2 * 5 = 3 * 3 * 2 * 2 * 5 = 180

Exercise 4: Find the GCF of the following numbers.

18 and 42

Factorization of 18: 2 * 3 * 3 = 2 * 3^2
Factorization of 42: 2 * 3 * 7

GCF: 3 * 2 = 6

Finding the GCF is similar to the LCM except that now we only want to include the lowest power of each prime factor that occurs in both factorizations. In this problem, the 7 is not a factor of both 18 and 42 so it is not included in the GCF.

Exercise 5: Find the GCF of the following numbers.

16 and 28

Factorization of 16: $2 * 2 * 2 * 2 = 2^4$
Factorization of 28: $2 * 2 * 7 = 2^2 * 7$

GCF: $2 * 2 = 4$

Exercise 6: Find the GCF of the following numbers.

24, 36, and 60

Factorization of 24: $2 * 2 * 2 * 3 = 2^3 * 3$
Factorization of 36: $2 * 2 * 3 * 3 = 2^2 * 3^2$
Factorization of 60: $2 * 2 * 3 * 5 = 2^2 * 3 * 5$

GCF: $2^2 * 3 = 2 * 2 * 3 = 12$