Math 10

Lesson 1–1 Answers

**Lesson Questions**

**Question 1**

1 x 36

2 x 18

3 x 12 Factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18, 36

4 x 9

6 x 6

**Question 2**

1 row of 260

2 rows of 130

4 rows of 65

13 rows of 20

20 rows of 13 There are 8 different ways to arrange 260 chairs

65 rows of 4

103 rows of 2

260 rows of 1

**Question 3**

The only factors of 17 are 1 and 17 (17 is a prime number).

**Question 4**

Identify all of the prime numbers between 2 and 20.

**2** 3 4 **5** 6 **7** 8 9 10 **11** 12 **13** 14 15 16 17 18 **19** 20

**Question 5**

The factors of 18 are 1, 2, 3, 6, 9 and 18.

**Question 6**

After 10, the next three composite numbers that are odd are 15, 21 and 25. (Any number that is not a prime number is a compositye number.)

**Question 7**

There are 5 teaching days per week.

 rounded to 17 since the last two days are in week 17

The fund would contain 17 loonies … it’s a start!!

**Question 8**

13, 26, 39, 52, 65, 78

**Assignment**

**1.** List the first 6 multiples of each number.

**a)** 5, 10, 15, 20, 25, 30

 **b)** 11, 22, 33, 44, 55, 66

**c)** 18, 36, 54, 72, 90, 108

**d)** 25, 50, 75, 100, 125, 150

**2.** Determine the first 3 common multiples of each pair of numbers.

**a)** 2 and 5 **b)** 3 and 9 **c)** 7 and 3 **d)** 8 and 10

 **10, 20, 30 9, 18, 27 21, 42, 63 40, 80, 120**

**3.** Determine the factors of each number. List the factors that are prime numbers.

**a)** 15 **b)** 20 **c)** 24

 **1, 3, 5, 15 1, 2, 4, 5, 10, 20 1, 2, 3, 4, 6, 8, 12, 24**

 **primes 3, 5 primes 2, 5 primes 2, 3**

**d)** 45 **e)** 60 **f)** 100

 **1, 3, 5, 9, 15, 45 1, 2, 4, 5, 6, 10, 12, 15, 20, 60 1, 2, 4, 5, 10, 20, 25, 50, 100**

 **primes 3, 5 primes 2, 5 primes 2, 5**

**4.** Determine the common factors of each pair of numbers.

**a)** 16 and 24 **b)** 15 and 45 **c)** 18 and 42 **d)** 20 and 30

 **2, 4, 8 3, 5, 15 2, 3, 6 2, 5, 10**

**5.** Which of the numbers from 2 to 130 are prime numbers?

We can use the table on the next page. Watch the video clip on youtube at <http://www.youtube.com/watch?v=9m2cdWorIq8> . The Greek mathematician Eratosthanes invented this technique and it is called the Sieve of Eratosthanes.

The primes between 2 and 130 are 2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97 101 103 107 109 113 127

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2 | 3 |  | 5 |  | 7 |  |  |  |
| 11 |  | 13 |  |  |  | 17 |  | 19 |  |
|  |  | 23 |  |  |  |  |  | 29 |  |
| 31 |  |  |  |  |  | 37 |  |  |  |
| 41 |  | 43 |  |  |  | 47 |  |  |  |
|  |  | 53 |  |  |  |  |  | 59 |  |
| 61 |  |  |  |  |  | 67 |  |  |  |
| 71 |  | 73 |  |  |  |  |  | 79 |  |
|  |  | 83 |  |  |  |  |  | 89 |  |
|  |  |  |  |  |  | 97 |  |  |  |
| 101 |  | 103 |  |  |  | 107 |  | 109 |  |
|  |  | 113 |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 127 |  |  |  |