

August 22, 2017

- * Student Score Calculator due Monday.
- * Start Reading CORJ 1.1

Aug 22-9:52 AM

Sets: a collection of things

$$S = \{ 1, 3, \dots \}$$

↑ name → ellipsis "so on"

$$S_2 = \{ 1, 3, 5, 7, \dots \}$$

↑ element of

$$9 \in S_2$$

↑ element of

$$4 \notin S_2$$

Not an element of

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Numeric Sets

① $N = \{ 1, 2, 3, 4, \dots \}$

the set of Natural Numbers (counting)

There is a number n that can be written as the product of two other numbers, lets call them m and k .

$$n = m \cdot k$$

$$= m k$$

m and k are called factors or divisors of n .

$12 = 3 \cdot 4$

$\frac{12}{3} = 4$

$\frac{12}{4} = 3$

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If there is a number, called p , and if p has as divisors p and "1", we say p is Prime.

$$p = p \cdot 1$$

$7 = 7 \cdot 1$

$\frac{7}{7} = 1$

$\frac{7}{1} = 7$

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The Fundamental Theorem of Arithmetic

any number (N) that is not prime can be written as the product of primes.

24 (use a factor tree)

```

    24
   / \
  ②  12
     / \
    ②  6
       / \
      ②  ③
  
```

$24 = 2 \cdot 2 \cdot 2 \cdot 3$

$= 2^3 \cdot 3$

Aug 22-10:45 AM