

January 11, 2017

$$N = \{1, 2, 3, \dots\}$$

$$n = m \cdot k$$

Product \Rightarrow factors

$n = 12$
 $m = 4$
 $k = 3$

$$n = m \cdot k$$

* $12 = 4 \cdot 3$

• $\frac{12}{4} = 3$ *factors*

• $3 \left(\frac{12}{3} = 4 \right)$

~~• $2 \cdot \frac{12}{2} = 3 \cdot 4$~~
 $12 = 3 \cdot 4$

$$35 = m \cdot k$$

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$$n = m \cdot k$$

a natural number
 called $p \rightarrow$ (Prime Number)

$$p = p \cdot 1$$

$$\frac{p}{p} = 1$$

$$\frac{p}{1} = p$$

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$$5 = 5 \cdot 1$$

$$\frac{5}{5} = 1$$

$$\frac{5}{1} = 5$$

} True

$$6 = 6 \cdot 1$$

$$\frac{6}{6} = 1$$

$$\frac{6}{1} = 6$$

} True!

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a Prime number is a natural number divisible only by itself & one.

$$P = \{2, 3, 5, 7, 11, 13, \dots\}$$

Composite: a non-prime number.

$$6 = 2 \cdot 3$$

Prime

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$$56 = 2 \cdot 2 \cdot 2 \cdot 7$$

\swarrow
 $\textcircled{2} \cdot 28$
 $\swarrow \searrow$
 $68 \quad 14$
 $\swarrow \searrow$
 $\textcircled{2} \cdot 34 \quad \textcircled{2} \cdot \textcircled{7}$
 $\swarrow \searrow$
 $\textcircled{2} \cdot \textcircled{17}$
 $68 = 2 \cdot 2 \cdot 17$

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$$\mathbb{W} = \{0, 1, 2, 3, \dots\}$$

↑

whole numbers

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$$\mathbb{Z} = \{\dots, -2, -1, 0, 1, 2, \dots\}$$

Integers

16, -123, 1043, -2

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