Prime Numbers

Prime Numbers

A Prime Number can be divided evenly **only** by 1 & itself.
And it must be a whole number greater than 1.

The first few prime numbers are 2, 3, 5, 7, 11, 13, 17 etc.....

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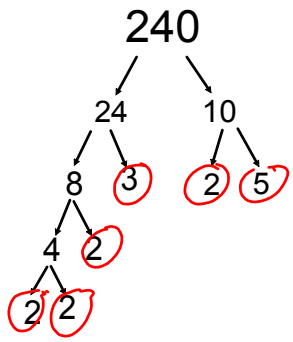
Determining the Prime Factors of a Whole Number

Write the prime factorization of 240

Draw a Factor Tree !!



The Prime Factorization of 240 is:
2 x 2 x 2 x 3 x 5 x 2 or 2^4 x 3 x 5

The Prime Factors of 240 are: 2, 3, & 5

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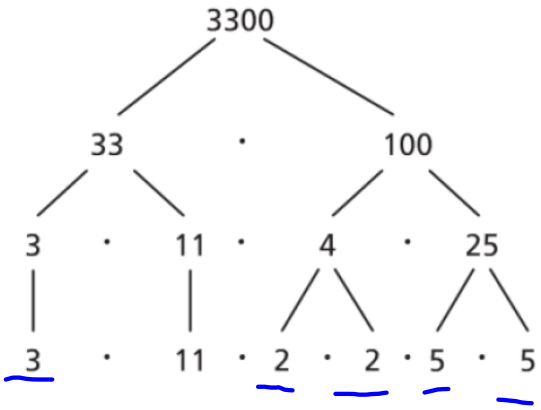
Mar 14-1:03 PM

Write the prime factorization of 3300 and the factors



The prime factors of 3300 are 2, 3, 5, and 11.

The prime factorization of 3300 is: $2 \cdot 2 \cdot 3 \cdot 5 \cdot 5 \cdot 11$, or $2^2 \cdot 3 \cdot 5^2 \cdot 11$

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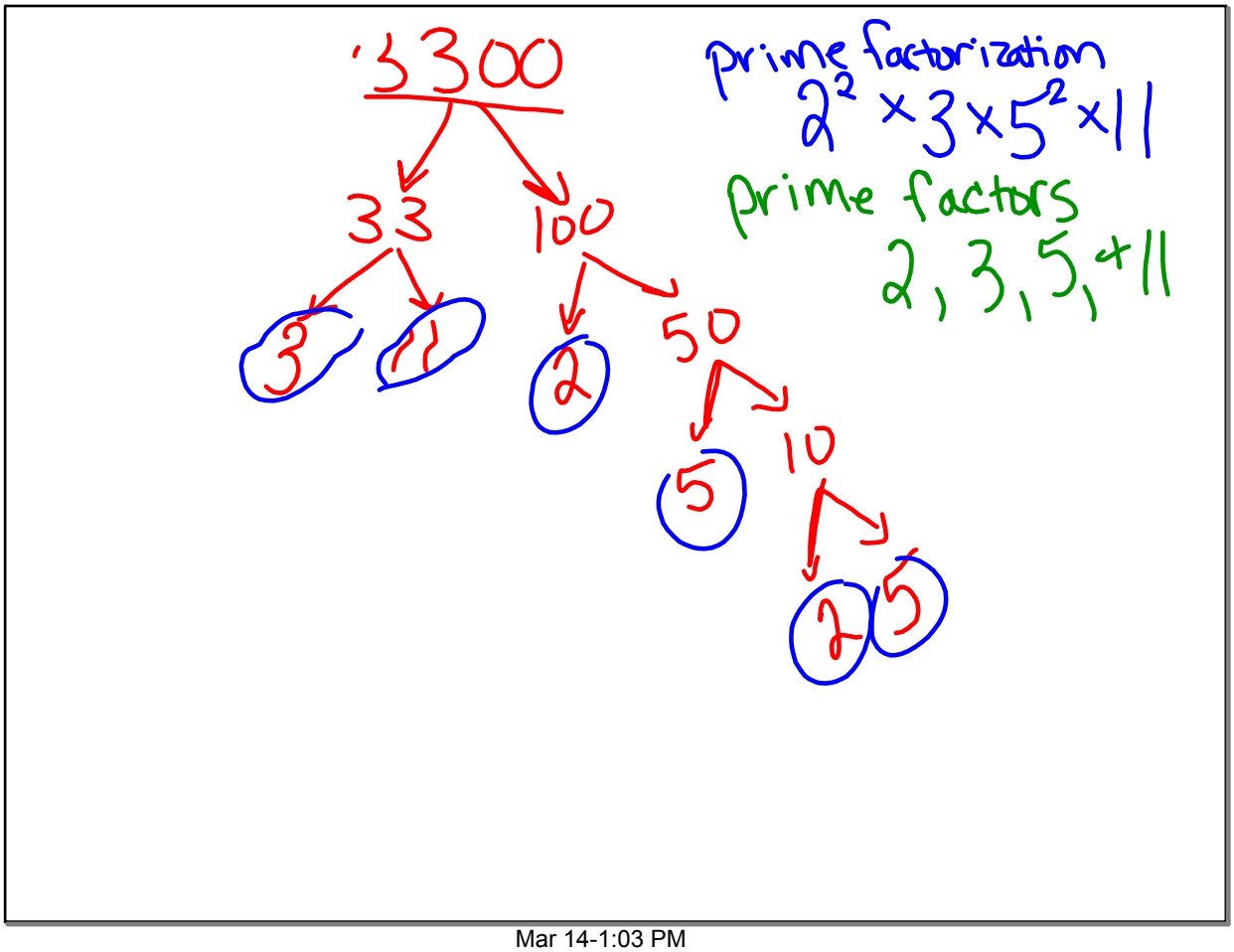

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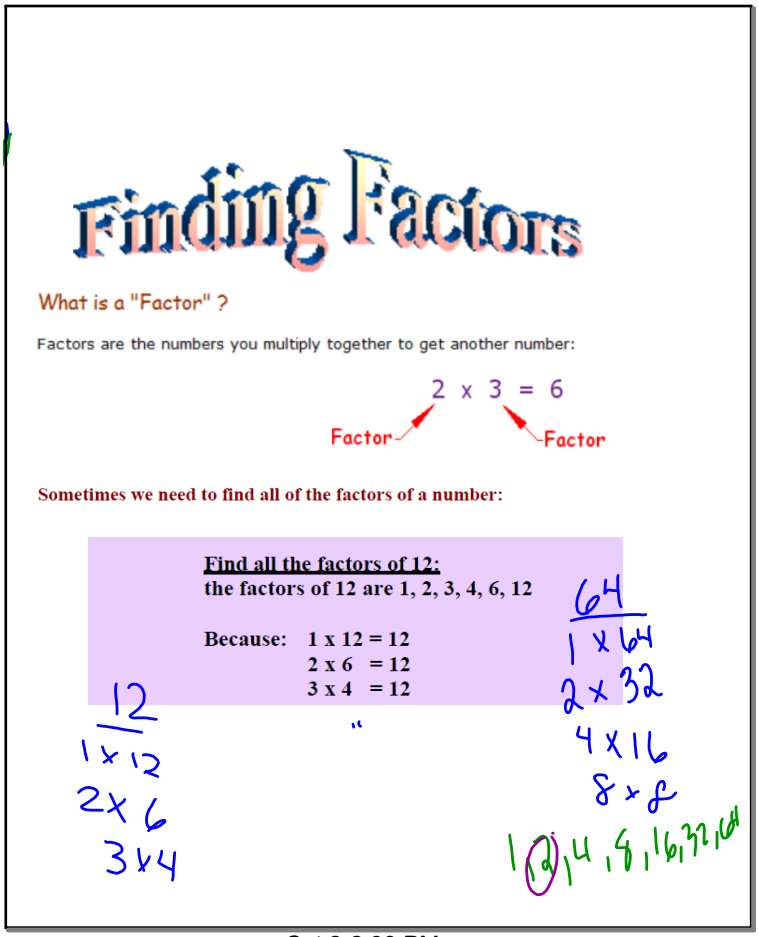

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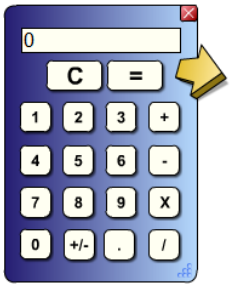
Lets try some bigger numbers!

Determine all of the factors of 132

132
1 x 132
2 x 66
3 x 44
4 x 33
~~6 x 22~~
12 x 11



11 x 12

prime
2, 3, 11

Oct 2-2:49 PM

GCF → Greatest Common Factor

36
1 x 36
2 x 18
3 x 12
4 x 9
6 x 6

54
1 x 54
2 x 27
3 x 18
6 x 9

Mar 14-1:24 PM

Lets try some bigger numbers!

Determine all of the factors of 132

$132 \div 1 = 132$
$132 \div 2 = 66$
$132 \div 3 = 44$
$132 \div 4 = 33$
$132 \div 6 = 22$
$132 \div 11 = 12$

These are the factors of 132!

The Factors of 132 are : 1, 2, 3, 4, 6, 11, 12, 22, 33, 44, 66, 132

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Lets try some bigger numbers!

Determine all of the factors of 162

Oct 2-2:47 PM

Lets try some bigger numbers!

Determine all of the factors of 162

$162 \div 1 = 162$
$162 \div 2 = 81$
$162 \div 3 = 54$
$162 \div 6 = 27$
$162 \div 9 = 18$

These are the factors of 162!

The Factors of 162 are : 1, 2, 3, 6, 9, 18, 27, 54, 81, 162

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Common Factoring

for the Greatest Common Factor
GCF

Feb 7 - 1:16 PM

for the Greatest Common Factor
GCF

Find the GCF of 36 and 54.

The factors of 36 are **1**, **2**, **3**, 4, **6**, **9**, 12, **18**, and 36.

The factors of 54 are **1**, **2**, **3**, **6**, **9**, **18**, 27, and 54.

The **common factors** of 36 and 54 are **1, 2, 3, 6, 9, 18**

Although the numbers in **bold** are all common factors of both 36 and 54, **18** is the greatest common factor.

Feb 7 - 1:16 PM

36
1 x 36
2 x 18
3 x 12
4 x 9
6 x 6

1, 2, 3, 4, 6, 9, 12, 18, 36

54
1 x 54
2 x 27
3 x 18
6 x 9

1, 2, 3, 6, 9, 18, 27, 54

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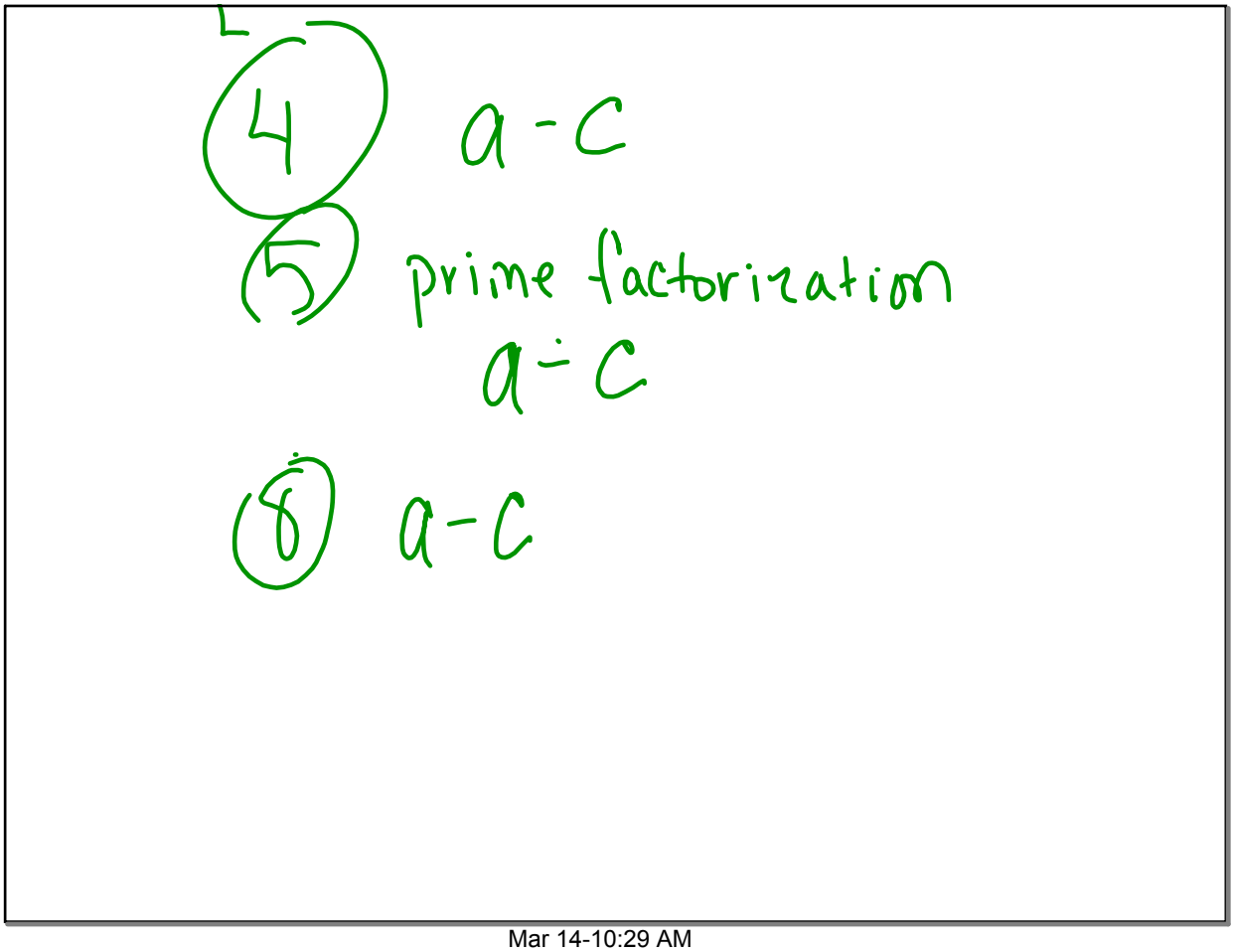

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