

Sept/16/13

I can represent composite numbers as products of prime factors.

Write 48 as the product of 3 factors in as many ways as possible.

$$1 \times 2 \times 24$$

$$1 \times 12 \times 4$$

$$1 \times 6 \times 8$$

$$2 \times 4 \times 6$$

$$2 \times 3 \times 8$$

$$2 \times 2 \times 12$$

$$2 \times 4 \times 2 \times 3$$

I will be able to

Find the prime factors of given numbers

Sept/17/13

Review

Find the factors of 120

1, 120, 2, 60, 3, 40, 4, 30, 5, 24, 6, 20, 12, 10

$$120 = \overset{\text{Prime Factors}}{2, 3, 5, 2, 2}$$

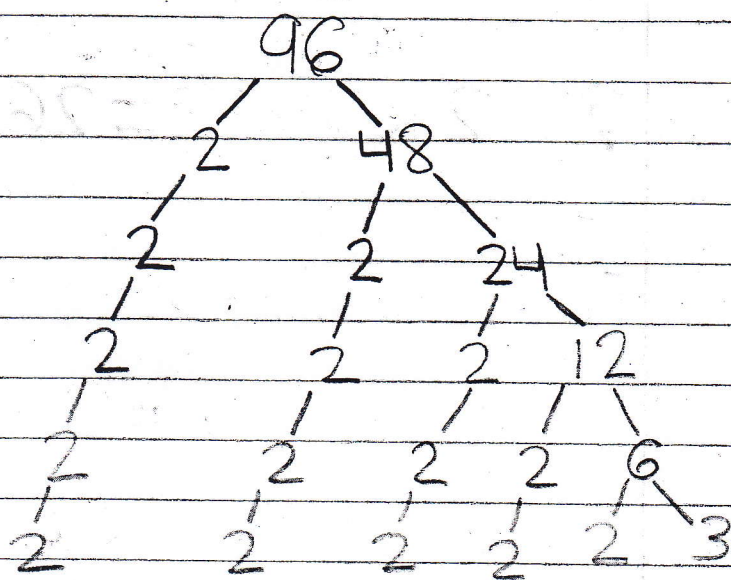
\*Prime Factor: a number that can only be divided by itself and 1 without leaving a remainder.\*



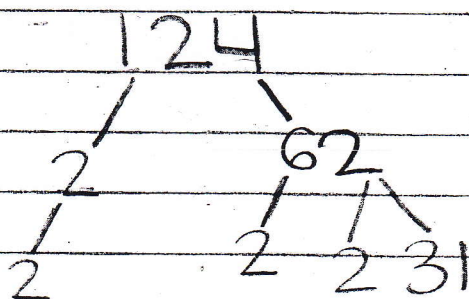
Learning Goal: I will be able to represent composite numbers as the product of prime factors.

Practice Find the Prime Factorization of.

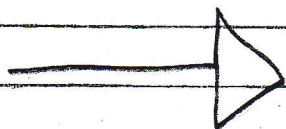
- 1) 96
- 2) 124
- 3) 260



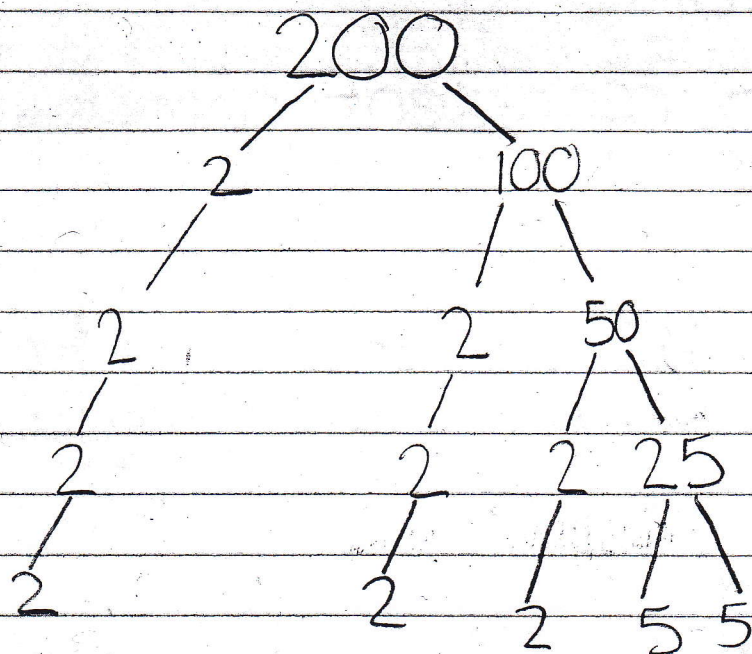
$$2 \times 2 \times 2 \times 2 \times 2 \times 3 = 96 \quad 2^5 \times 3 = 96$$



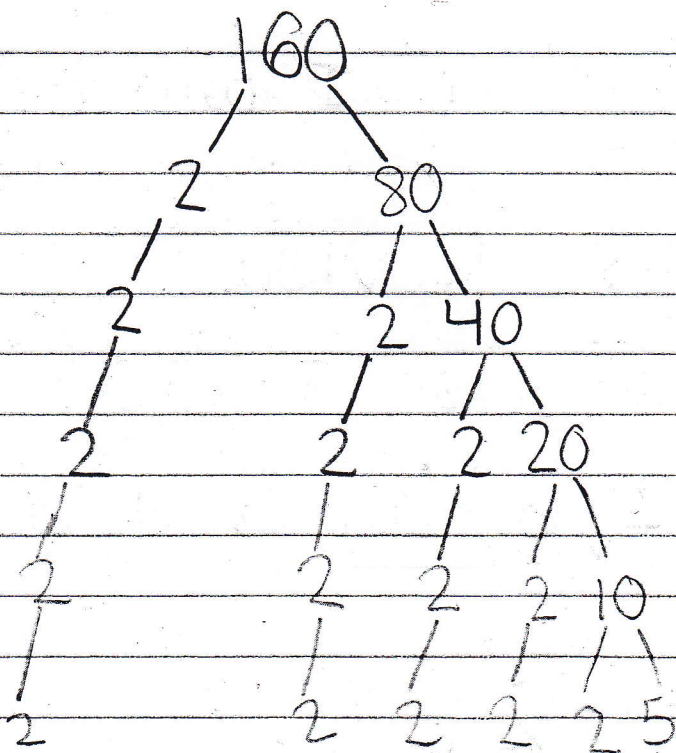
$$2 \times 2 \times 2 \times 31 = 124 \quad 2^3 \times 31 = 124$$







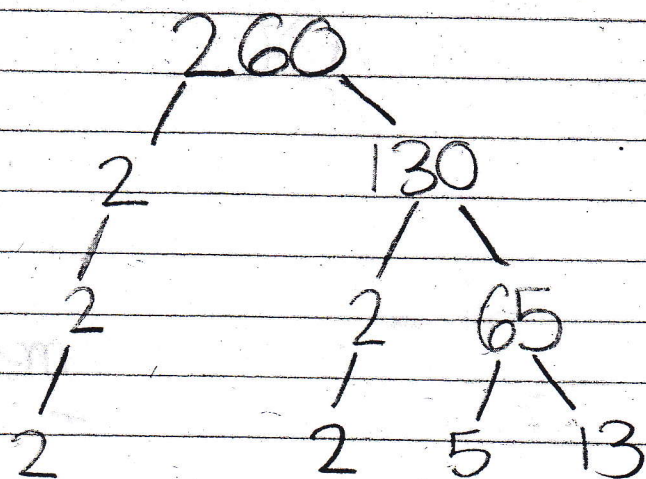
$$2 \times 2 \times 2 \times 5 \times 5 = 160 \quad \text{or} \quad 2^3 \times 5^2$$



$$2 \times 2 \times 2 \times 2 \times 2 \times 5 = 160 \quad \text{or} \quad 2^5 \times 5$$







$$2 \times 2 \times 5 \times 13 = 260 \quad 2^2 \times 5 \times 13 = 260$$

Find the standard form:

$$2^2 \times 3^2 \quad 2 \times 2 \times 3 \times 3 = 36$$

Standard Form: 36

$$3^3 \times 5^2 \quad 3 \times 3 \times 3 \times 5 \times 5 = 675$$

Standard Form: 675