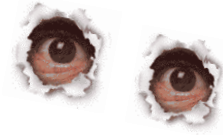




Warm Up



List the product of primes
(prime factorization) for

280

8600

What is the GCF of 45 and 30 ?

Oct 5-8:01 PM

Review Question

1. Determine the prime factorization, all factors, prime factors, and GCF of 56 & 72.

Mar 15-7:36 AM

What is the Least Common Multiple?

The least common multiple is the least multiple that is the same for two or more numbers.

Oct 2-2:57 PM

Determine the LCM of the following:

6 & 4

5 & 7

2 & 8

Oct 5-7:34 PM

The Least Common Multiple

Determine the least common multiple of 18, 20, and 30

Step #1 Write the prime factorization of each number.

Step #2 Circle the greatest power of each prime number.

Oct 2-2:58 PM

Step #1 Write the prime factorization of each number.

$$18 =$$

$$20 =$$

$$30 =$$

Oct 2-2:58 PM

Step #2 Circle the greatest power of each prime number.

$$18 = 2 \cdot 3 \cdot 3 = 2 \cdot 3^2$$

$$20 = 2 \cdot 2 \cdot 5 = 2^2 \cdot 5$$

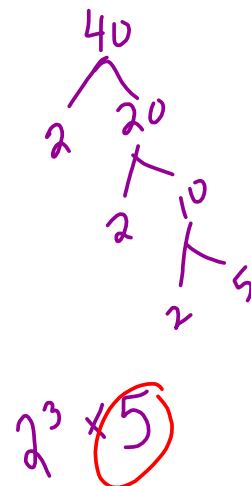
$$30 = 2 \cdot 3 \cdot 5$$

Solution: $2^2 \cdot 3^2 \cdot 5 = 4 \cdot 9 \cdot 5$
 $= 180$

Oct 2-2:58 PM

Warm-up

Find LCM of 32, 26, and 40



LCM: $2^5 \times 13 \times 5$
 2080

Mar 16-7:57 AM

GCF

150

```

      / \
     /   \
    15    10
   / \   / \
  5  3 5  2
            
```

$2 \times 3 \times 5 \times 5$

36

```

      / \
     /   \
    2    18
         / \
        /   \
       2    9
            / \
           /   \
          3    3
            
```

~~$2 \times 2 \times 3 \times 3$~~

GCF = $2 \times 3 = 6$

Mar 16-10:01 AM

LCM: 18, 20, 30

18

```

      / \
     /   \
    2    9
         / \
        /   \
       3    3
            
```

2×3^2

20

```

      / \
     /   \
    2    10
         / \
        /   \
       2    5
            
```

$2^2 \times 5$

30

```

      / \
     /   \
    3    10
         / \
        /   \
       2    5
            
```

$2 \times 3 \times 5$

$2^2 \times 3^2 \times 5 = 180$

Mar 16-12:40 PM

Determine the least common multiple of 70, 90 & 140

$$70 \rightarrow 7 \times 5 \times 2$$

$$90 \rightarrow 3^2 \times 2 \times 5$$

$$140 \rightarrow 2^2 \times 5 \times 7$$

$$2^2 \times 3^2 \times 5 \times 7$$

$$\boxed{1260}$$

GCF of 70, 90, 140

$$5 \times 2 = \boxed{10}$$

$$2 \times 5 \times 2$$

$$3^2 \times 2 \times 5$$

$$2^2 \times 5 \times 7$$

Oct 2-2:59 PM

Just another Method

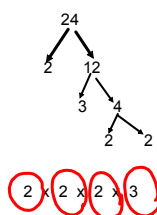
Using Prime Factors to Solve GCF of Numbers

Find GCF :

Steps:

- 1) Find the prime factors of each number (tree)
- 2) Compare the prime factors of each number
- 3) Circle the prime factors that each number has in common
- 4) Multiply common prime factors together to get GCF of #'s

Example:
Find the GCF of 24 and 72



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



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

$$2 \times 2 \times 2 \times 3 =$$

$$\boxed{24}$$

Oct 5-8:47 PM

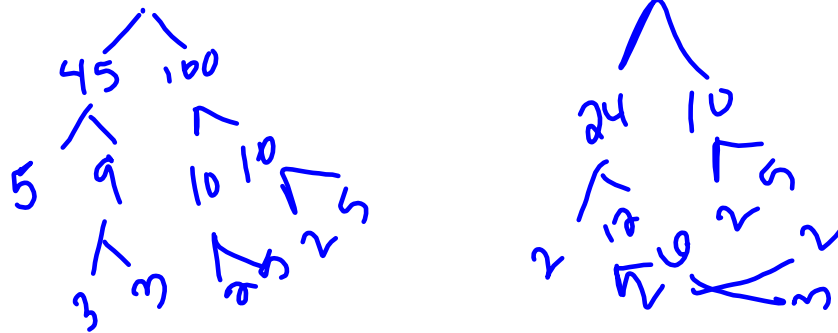
prime factorization: $\frac{4500}{240} = \frac{2^2 \times 3^2 \times 5^3}{2^4 \times 3 \times 5}$

prime factors: $\frac{4500}{240} = \frac{2, 3, 5}{2, 3, 5}$

GCF: $2^2 \times 3 \times 5 = 60$

LCM: $2^4 \times 3^2 \times 5^3 = 18000$

4500 & 240



Mar 15-7:38 AM

Classwork

Exercises

A _____

3 4^{a, b, c} 5^{a, b, c}

B _____

6^{a, c, e} 7 8 9^{a, c} 10^{a, c, e} 11 12 13

14 15^{a, d} 16^{a, d} 17 18 19 20

C _____

21 22

Be prepared for quiz tomorrow

Oct 4-10:14 PM