

Pre-Algebra

Lesson 4.4

Least Common Multiple

Goal: to find the least common multiple of two numbers

Nov 16-8:56 AM

A multiple is the product of the number and any other non-zero number.

A common multiple is a multiple shared by two or more numbers.

Ex: multiples of

8: 8, 16, 24, 32, 40, 48...

12: 12, 24, 36, 48, 60...

Nov 16-8:56 AM

The least common multiple (LCM) is the lowest multiple that two or more numbers have in common.

Go back and find the LCM of 12 and 8. GCF

24

Nov 16-8:56 AM

Find the LCM of the following:

a). 16, 24

16-  
24-                      48

b). 15, 30, 50

15 → 15, 30  
30 → 30  
50 → 50,

Nov 16-8:56 AM

One brand of hot dogs is sold in packages of 6. One brand of buns is sold in packages of 8. What is the least number of hot dogs you can buy and be able to buy an equal number of buns?

4 hot dogs 6 → 6, 12, 18, 24, 30, 36  
3 buns 8 → 8, 16, 24

Nov 16-8:56 AM

Find the LCM of  $4g^3h^2$  and  $15g^2h^4$

4 → 4, 8, 12, 16, 20, 24, 28, 32, 36, 40  
15 → 15, 30, 45, 60, 75, 90

$g^2$   $g^2$   $g^3$   $g^4$   $60g^3h^4$   
 $h^2$   $h^2$   $h^3$   $h^4$   
 $h^2$   $h^2$   $h^3$   $h^4$   
 $h^4$   $h^4$   $h^4$   $h^4$

Nov 16-8:56 AM

The least common denominator of two or more fractions is the LCM of the denominators.

We can use the to compare fractions.

Which is larger?

$\frac{5}{8}$   $\frac{25}{40}$   $\frac{13}{20}$   $\frac{26}{40}$   
 8 → 20 →  
 ↓  
 20

Nov 16-8:56 AM

Order from least to greatest:

$2\frac{7}{8}$ ,  $2\frac{5}{6}$ ,  $2\frac{3}{10}$   
 $\frac{22}{8} = \frac{130}{480}$ ,  $\frac{17}{6} = \frac{1360}{480}$ ,  $\frac{23}{10} = \frac{1104}{480}$   
 $2\frac{3}{10}$ ,  $2\frac{5}{6}$ ,  $2\frac{7}{8}$

Nov 16-8:56 AM

Hwk: pg192

#16-36 evens, 38, 40, 44,

48, 54, 58, 60

Nov 16-8:56 AM