2 2 3 2
3 2 3

Finding LCM and GCF
With Prime Factorization

Name Stew Dat

Math6
Period _____

My numbers: 18, 24

Find Prime Factorization? 🌲 🌲

My common prime factors are:

2, 3

}

18

2 · 9
3 · 3

2 · 3 · 3

24

12 · 2
2 · 6
2 · 3

2 · 2 · 2 · 3

common prime factors

18   24

3   2   2
      3   2

unique prime
factors

unique prime
factors

LCM
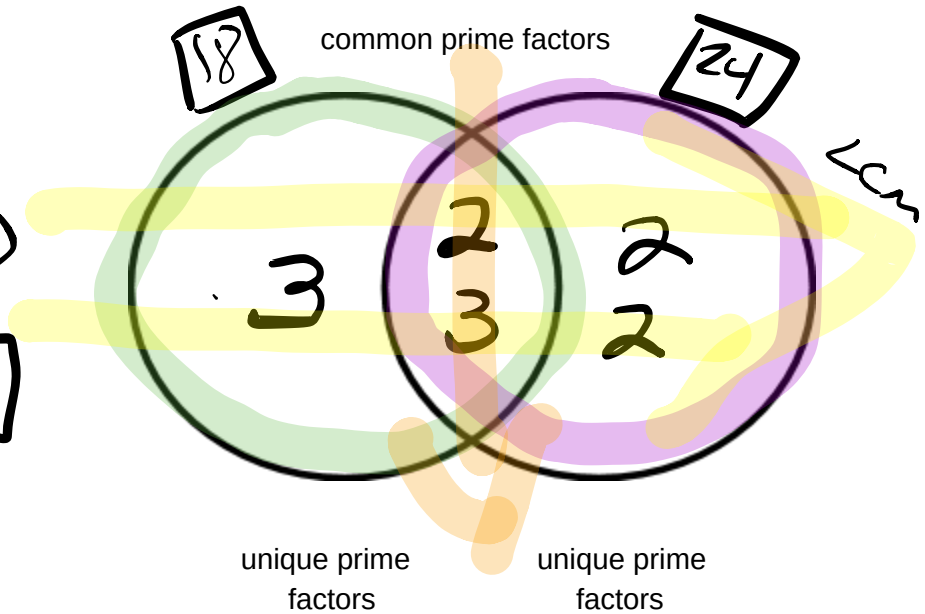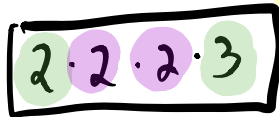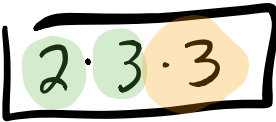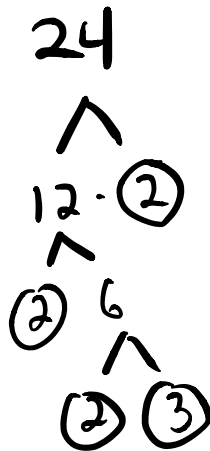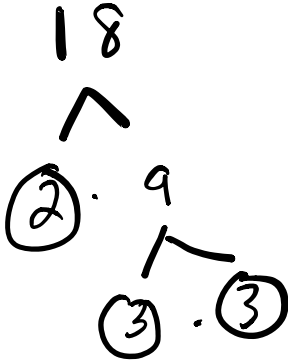
3 · 2 · 3 · 2 · 2 = 72

6
18
× 2
36
× 2
72

3 2 · 3 2 · 2
6 · 6 = 36
· 2
72

LCM = product of ALL Prime Factors
(in the Venn diagram)

= 3 · 2 · 3 · 2 · 2 = 72

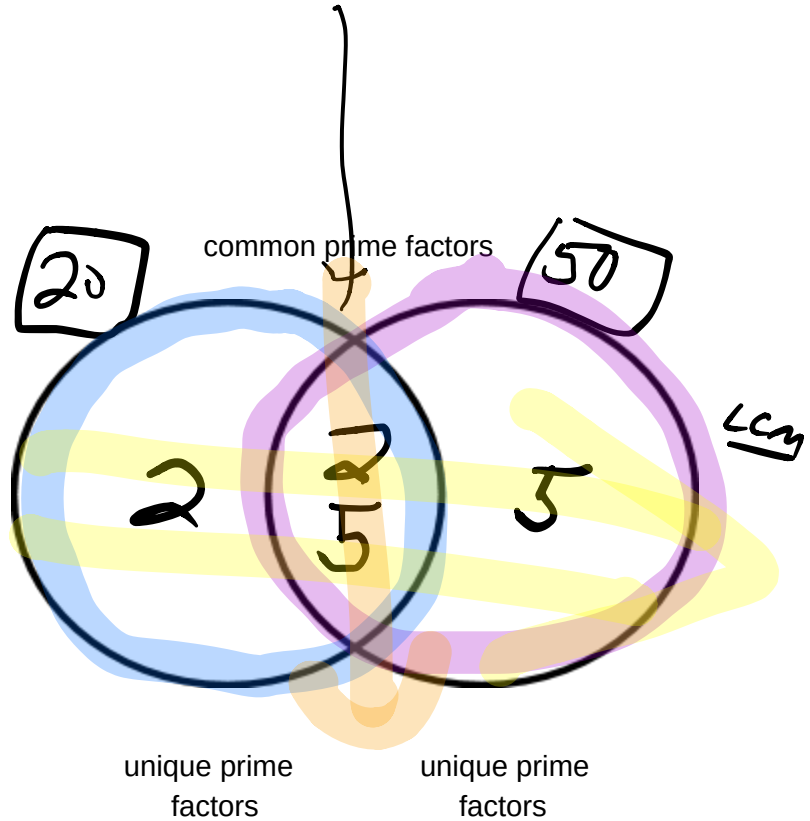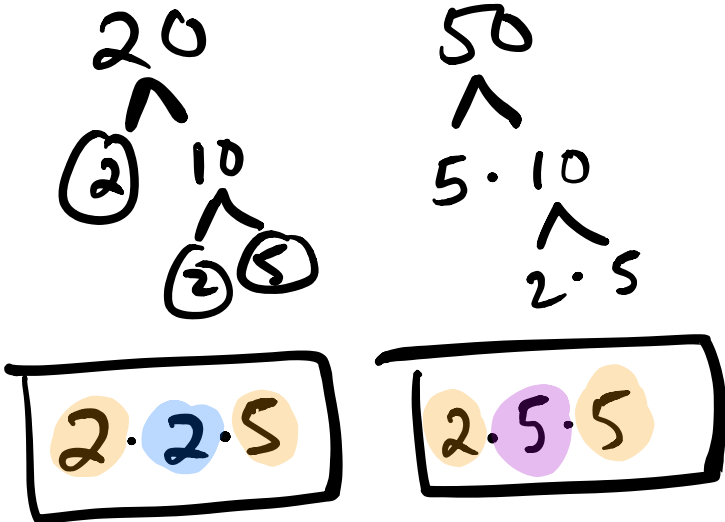GCF = product of ONLY the Common Prime Factors

= 2 · 3 = 6

My numbers: **20,50**

Find Prime Factorization?

🌲 🌲

My common prime factors are:

2,5

20

$2 \cdot 10$

$2 \cdot 5$

$\boxed{2 \cdot 2 \cdot 5}$

50

$5 \cdot 10$

$2 \cdot 5$

$\boxed{2 \cdot 5 \cdot 5}$

$2 \cdot 5 \cdot 2 \cdot 5$

$10 \cdot 10 = 100$

common prime factors

20 $\qquad$ 50

$2 \qquad \dfrac{2}{5} \qquad 5$

LCM

unique prime factors $\qquad$ unique prime factors

LCM = product of ALL Prime Factors
(in the Venn diagram)

$= 2 \cdot 2 \cdot 5 \cdot 5 = \boxed{100}$

GCF = product of ONLY the Common Prime Factors

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