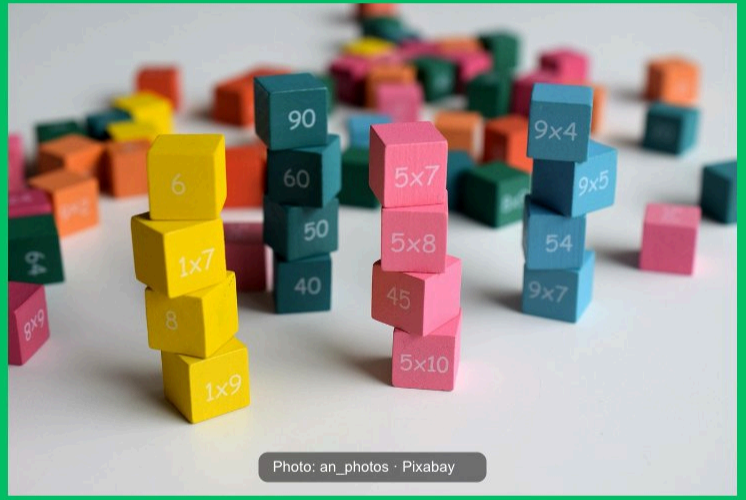
GCF and LCM

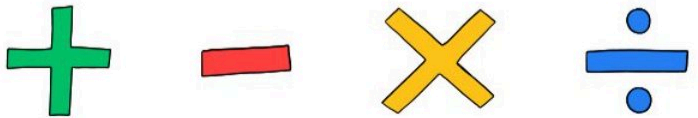
Share fairly, meet on time, and rewrite sums



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Same packs, same schedule

- Packs must be identical with nothing left over. Buses that repeat must meet again.

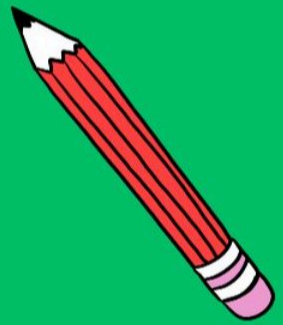


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$a^2+b^2=c^2$

Factors vs Multiples

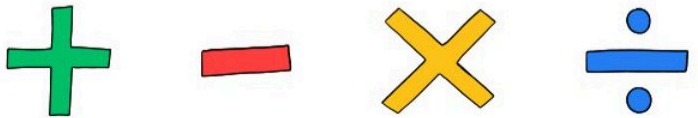
- A factor divides evenly with no remainder.
- A multiple lives in that number's times table.
- GCF is the biggest factor shared by both.
- LCM is the smallest multiple shared by both.



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Find the GCF by listing

1. List factors of 12: 1, 2, 3, 4, 6, 12
2. List factors of 18: 1, 2, 3, 6, 9, 18
3. Circle commons: 1, 2, 3, 6
4. Pick greatest: GCF is 6

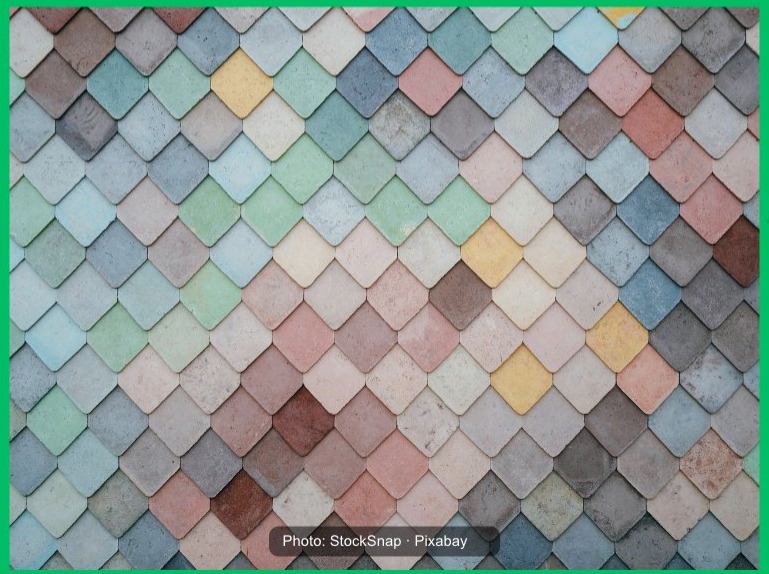


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$a^2+b^2=c^2$

What could this be?

You have 36 and 8 tiles. How can you make identical groups with nothing left over?





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See GCF in action



▶ 0:00 – 4:26

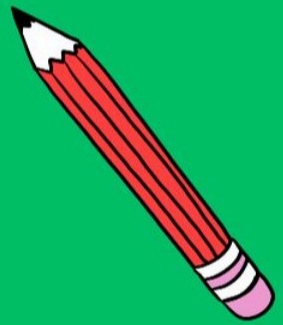
- Watch how lists stay in order
- Spot where common factors get circled

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$a^2+b^2=c^2$

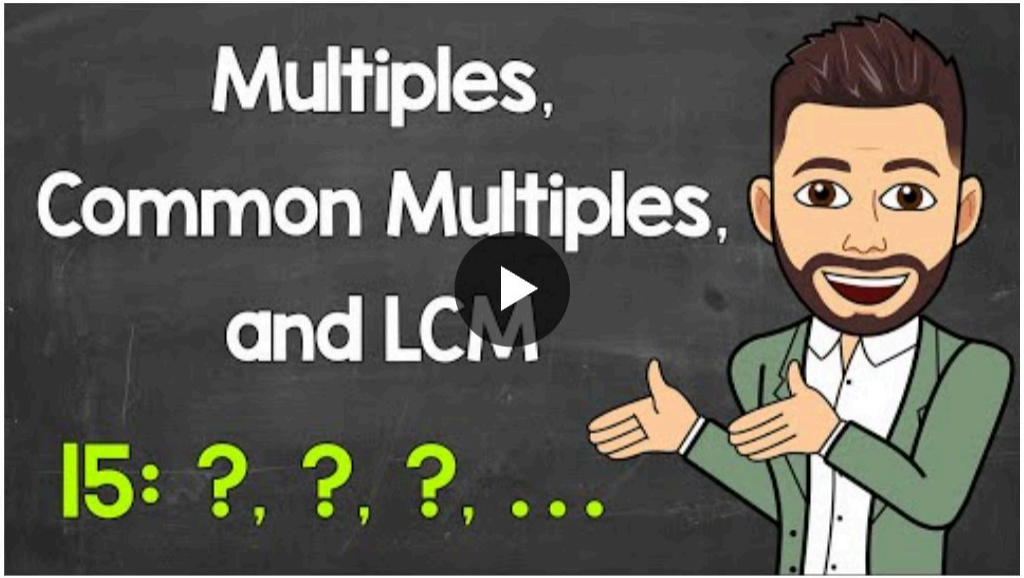
Rewrite sums with GCF

- 36 and 8 both share factor 4
- Divide: 36 ÷ 4 = 9 and 8 ÷ 4 = 2
- Write 4(9 + 2) with no common factor inside
- Check: 4 x 9 + 4 x 2 = 36 + 8



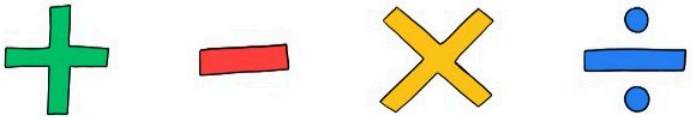
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See LCM in action

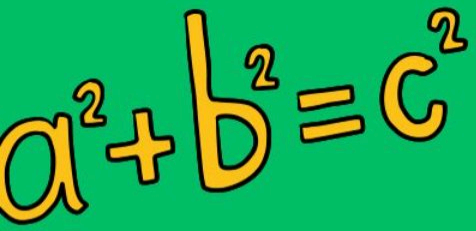


▶ 0:00 – 4:29

- Watch how multiples keep counting up
- Listen for first number in both lists



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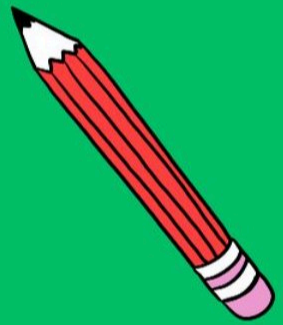
Your task

In pairs, find GCFs, LCMs, and rewrite two sums with the distributive property.

1. Find GCF of 30 and 20, and 24 and 16
2. Find LCM of 6 and 8, and 4 and 5
3. Rewrite 24 + 16 and 36 + 8 as GCF outside parentheses

10 min

In pairs

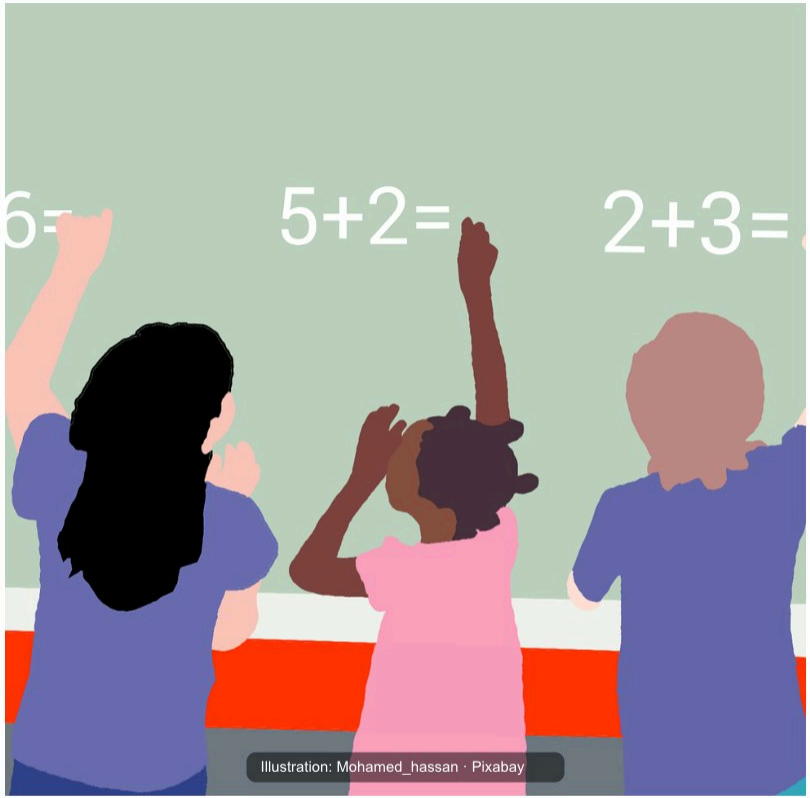


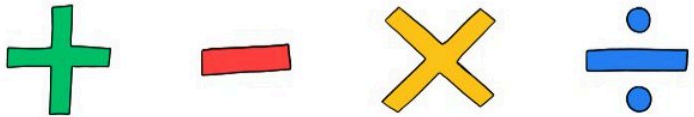
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DID YOU KNOW?

1 is a factor of every whole number.

That means any two numbers always have at least one common factor.

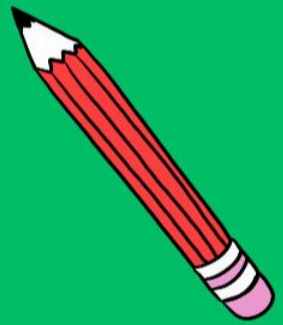




$a^2+b^2=c^2$

Which tool do you prefer?

When numbers are small, which way helps you most?



A List all factors and multiples

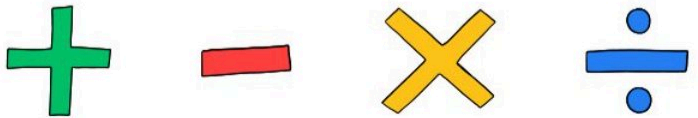
B Break into prime factors first

Vote with your hands, then explain why.

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Quick quiz

1. What is GCF of 12 and 18?
2. What is LCM of 6 and 8?
3. Rewrite 36 + 8 using GCF.
4. What is GCF of 30 and 20?



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