Prime Detectives

prime, composite and prime factors up to 100



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Today we will...

WE ARE LEARNING TO

Know prime, composite and prime factor words

Test if numbers up to 100 are prime

Recall prime numbers up to 19

SUCCESS LOOKS LIKE

- ✔ I can sort prime, composite and 1
- ✔ I can list prime factors of a small number



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Three number clubs





Prime

Has exactly two factors: 1 and itself.



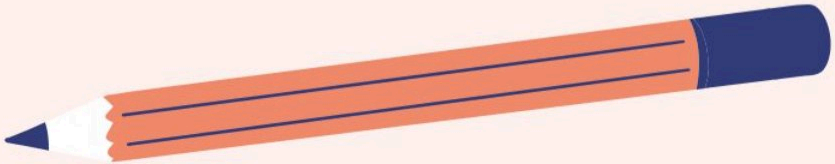
Composite

Has more than two factors.

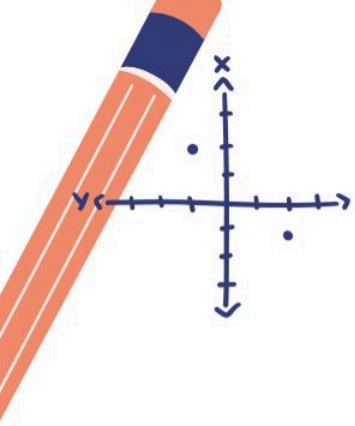


One is special

1 has one factor, so neither club.



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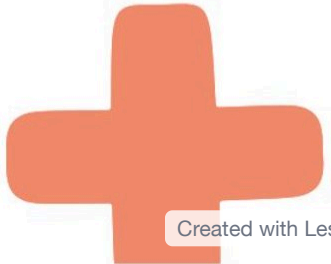


PRIMES TO 100

25

prime numbers hide between 1 and 100

Only 25 numbers are left when multiples are crossed out.



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How do you test?

Which test would you try first?

A Halve it: check if even

B Use times tables you know

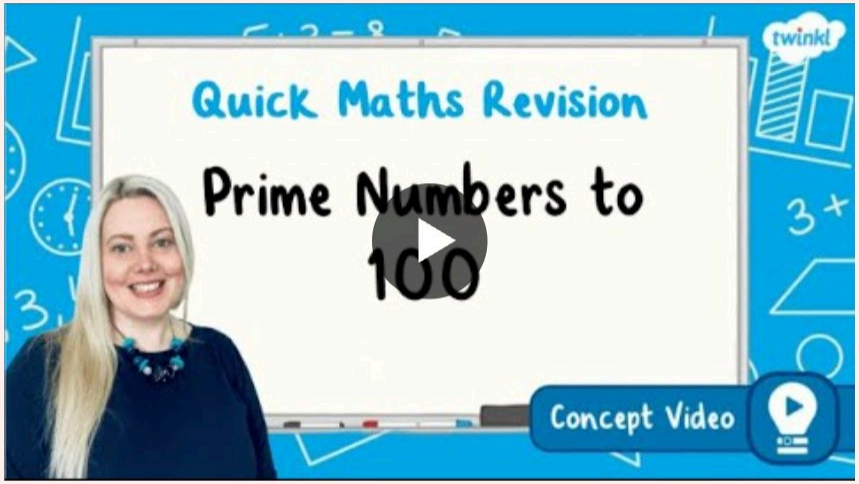
C Draw dots in neat rows



Vote with your hands, then explain why.

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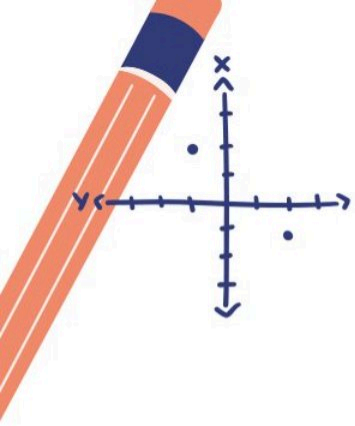
Watch: hunt to 100



▶ 0:00 – 2:25

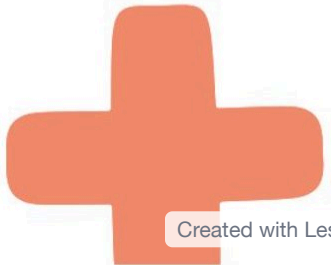
- Spot how multiples get crossed out
- Listen for prime and composite words

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Prime test in steps

1. Set 1 aside — it is neither.
2. Is it even and not 2? Composite.
3. Is it a multiple of 3, 5 or 7, unless it is 3, 5 or 7 itself? Composite.
4. Only 1 and itself left? It is prime.



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Watch: prime or composite?



▶ 0:00 – 3:37

- Shout prime or composite with the clip
- Catch examples of prime factors

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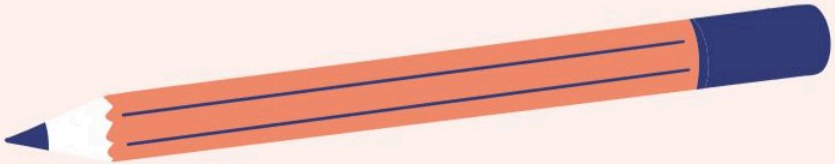
Your task

Sort numbers 1 to 20 into prime, composite and neither. Then find prime factors of 12.

1. Sort cards 1-20 into three groups.
2. Write factors for 12, circle its primes.
3. Check primes to 19: 2, 3, 5, 7, 11, 13, 17, 19.

15 min

In pairs



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Key words

prime number

Greater than 1 with only 1 and itself as factors.

composite number

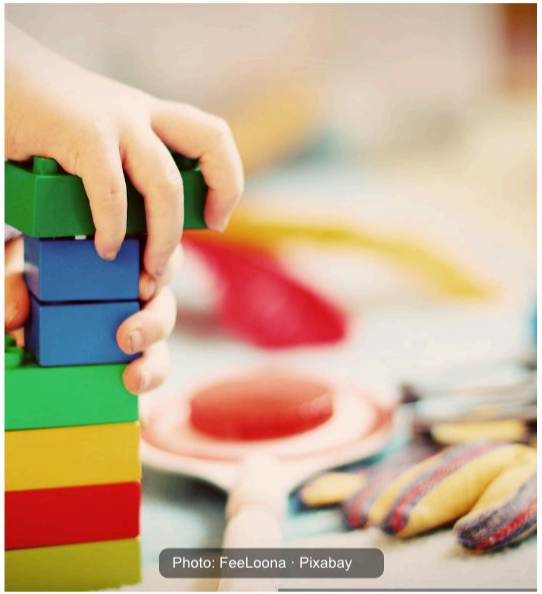
Greater than 1 with more than two factors.

factor

Whole number that goes in evenly.

prime factor

A factor that is itself prime.



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What could this be?

I show 7 dots. They only make one long row. What am I?



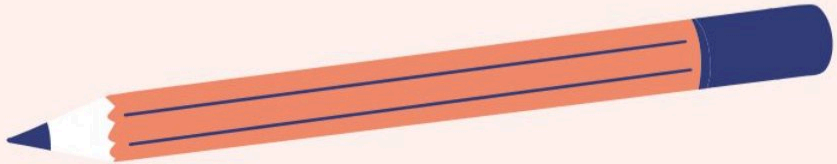
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Quick quiz

1. Is 13 prime? Why?
2. True or false: 1 is prime.
3. What are the prime factors of 6?
4. Which is the only even prime?



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