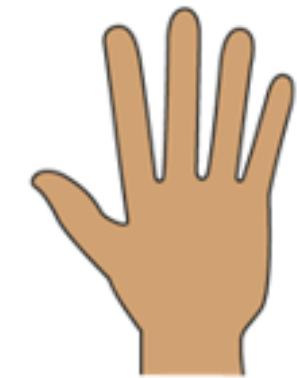
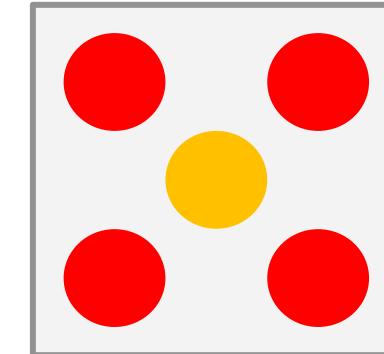


Mastering Number at Home

Reception



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Reception

Children and grown-ups will work through the session materials, guided by the class teacher. These will cover:

- Subitising
- Composition
- 3 or NOT 3
- Part-part-whole activities with images.

Aims of the session

- Share with you some of the things your child will be learning in school
- Improve your confidence in helping your child with maths
- Create some games and activities for use at home
- Share with you the home learning activities

Why engage you in your child's learning?

Research evidence suggests that when parents are engaged in their children's learning, outcomes for children can be improved.

Research also highlights the fact that parents feel they need more support to understand the current curriculum content and how they can support their child with their learning at home.

Desforges, C. and Abouchaar, A. (2003); Goodall, J. and Vorhaus, J. (2011);
The Education Endowment Foundation (2019); Sarjeant, S. (2021)

BBC News Report 2006

69% of parents do not help children with their homework because...

*Everything has changed since they were at school
and they are not confident in the new methods.*

BBC News Report 2010

82% of parents feel unable to help pupils with their homework.

The ‘problem’ with maths

“My dad thinks that the way **he** does maths is easier and better than my way but he doesn’t understand my way and his way confuses me.”

Pupil – Catford High School



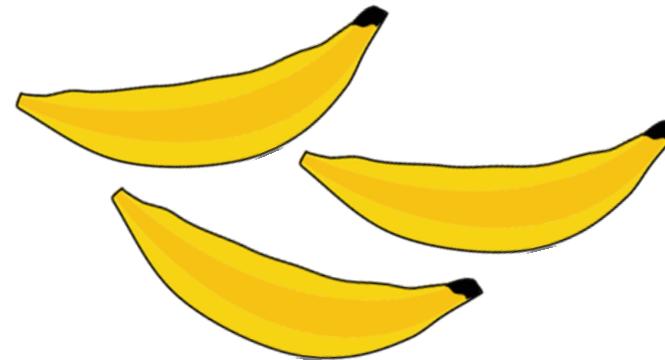
How does Mastering Number help us to teach maths in school?

The Mastering Number Programme in Reception will help your child to develop good *number sense*.

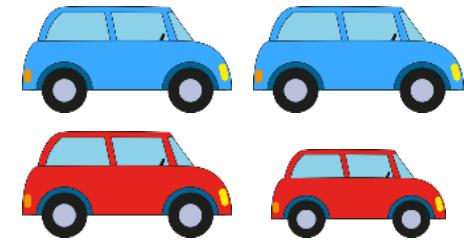
Some of the things they are learning include:



Counting



Recognising small numbers of objects and making their own collections

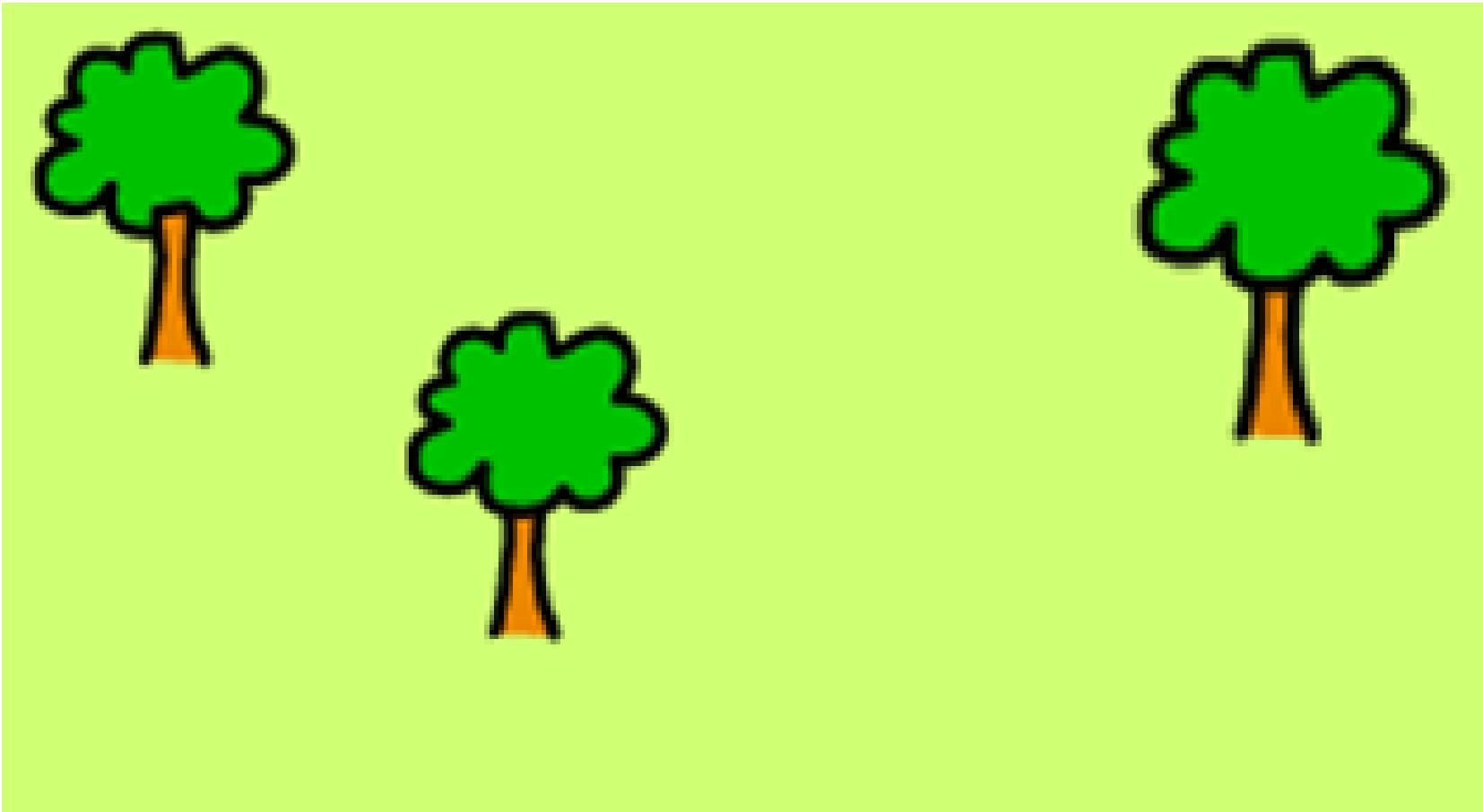


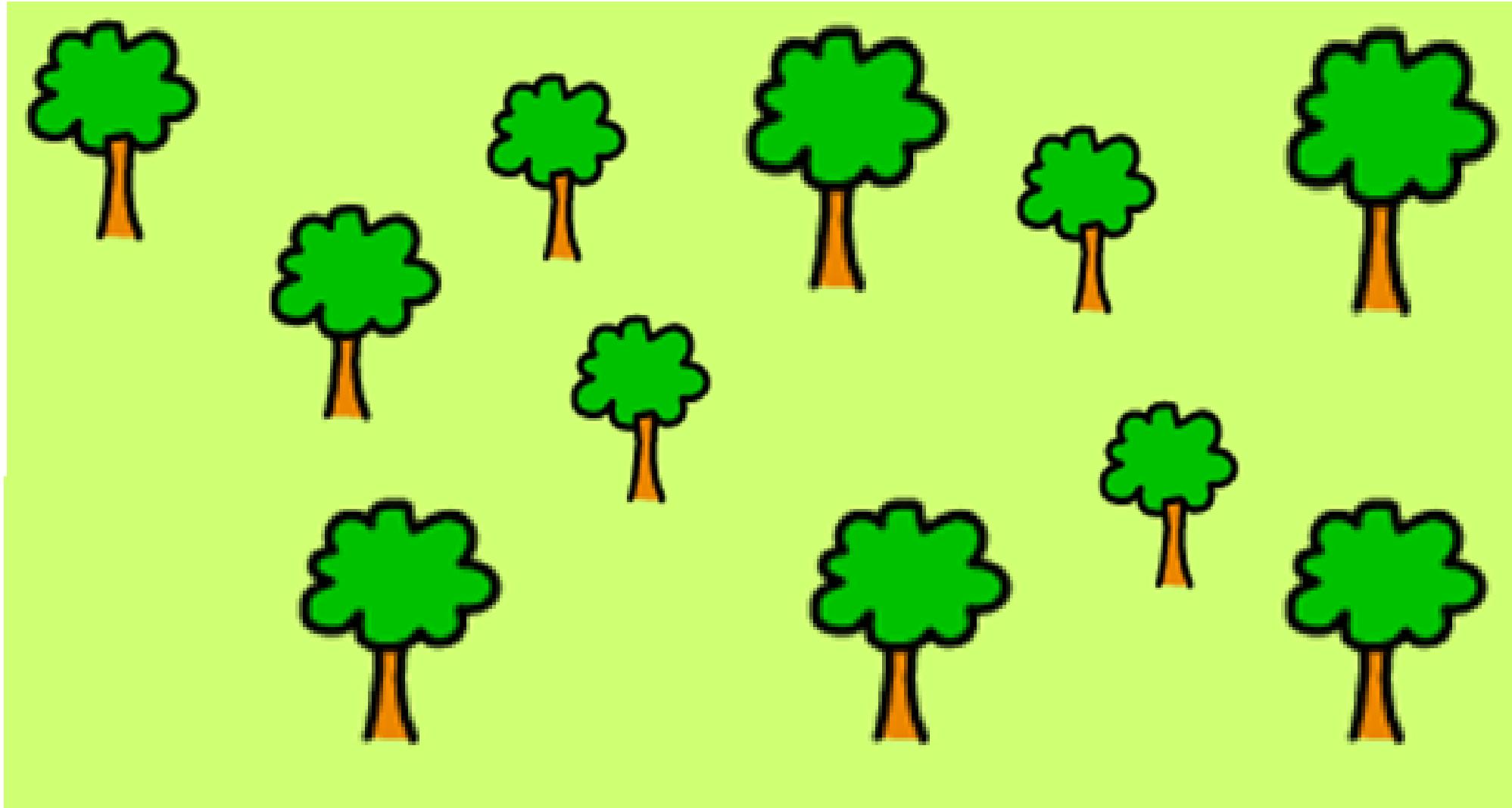
Know different ways to 'make' (compose) a number

Let's do some maths with the children!

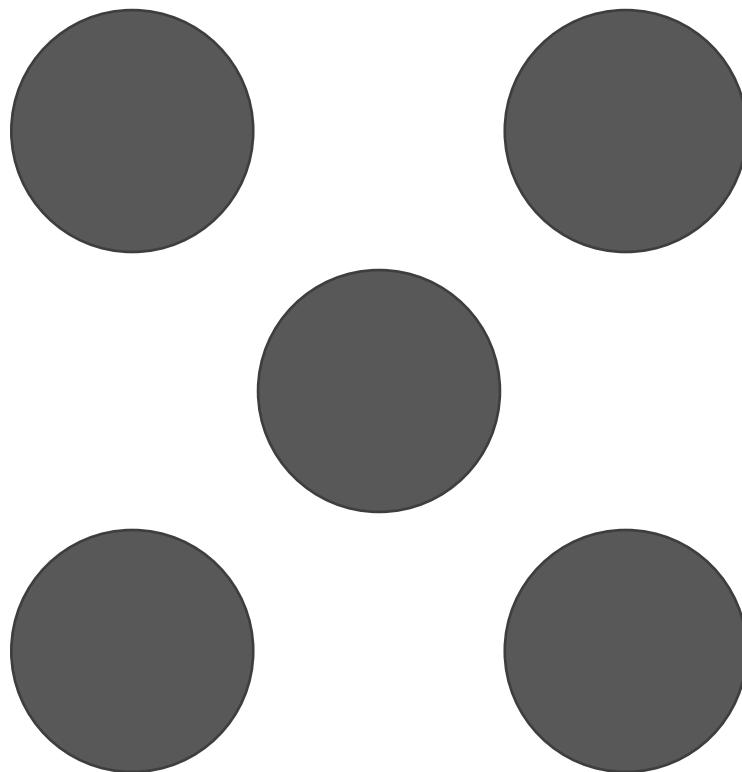


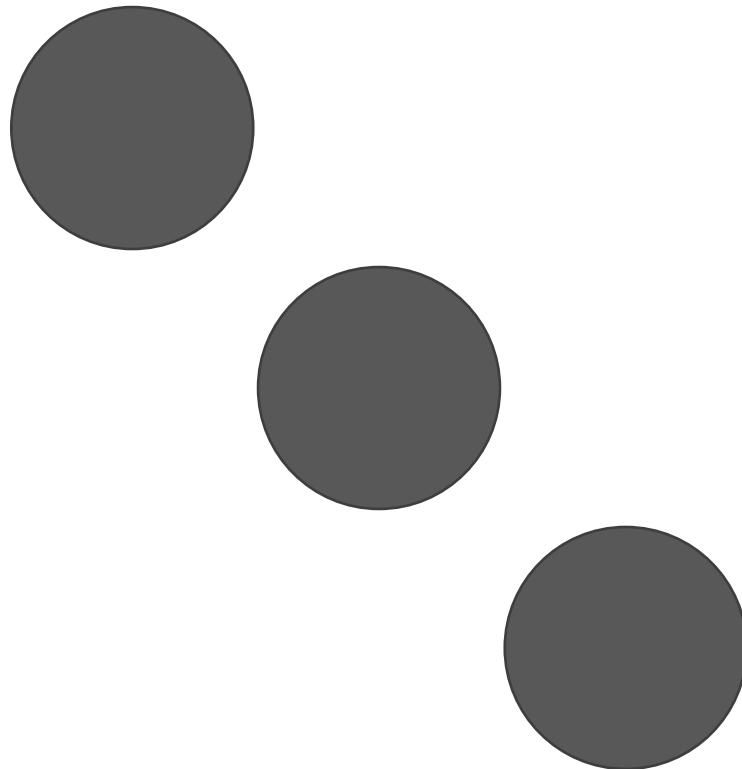
Look out for when you can use your subitising skills! Get those fast eyes ready!

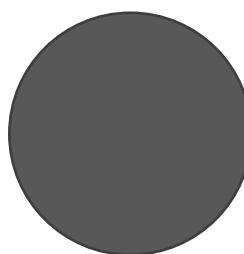
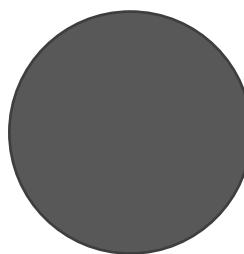
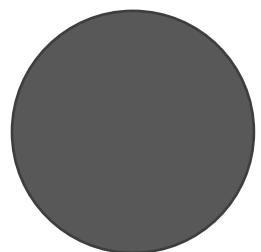
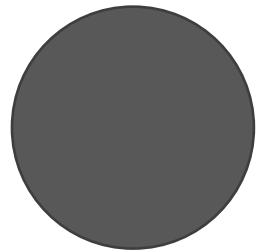










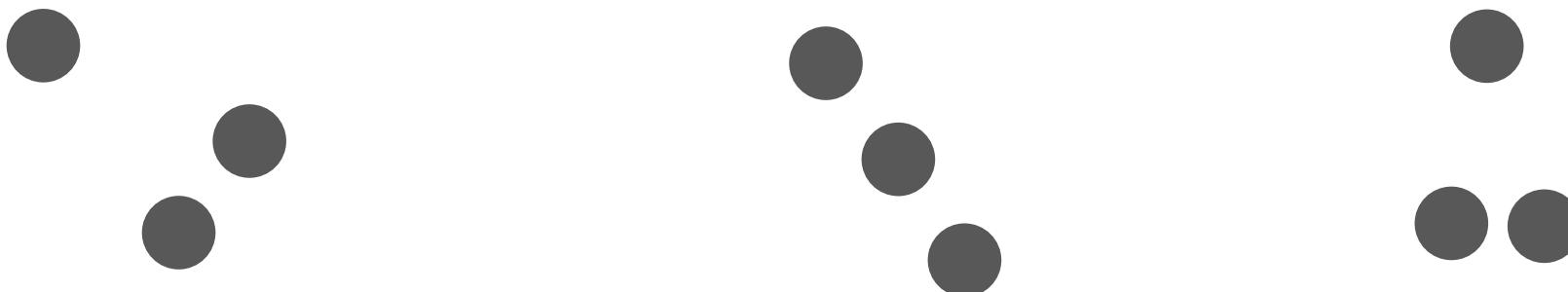


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Subitising

Subitising is the ability to recognise a *small quantity* of objects *without the need to count*.

Sometimes when we subitise we can see two groups at once; if we know that 3 can be ‘made’ of 2 and 1, then we know how many there are altogether without counting.



How will knowing how numbers are ‘made’ help?

If children know that **4 can be made of 3 and 1**, they can apply this knowledge later on to see that:

30 and 10 is 40

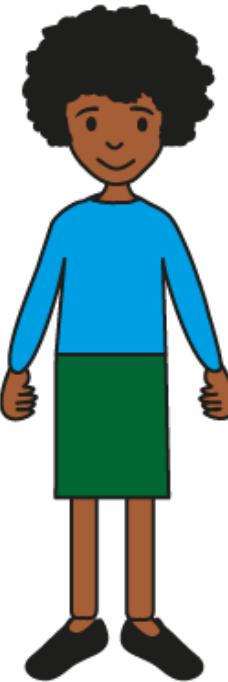
300 and 100 is 400

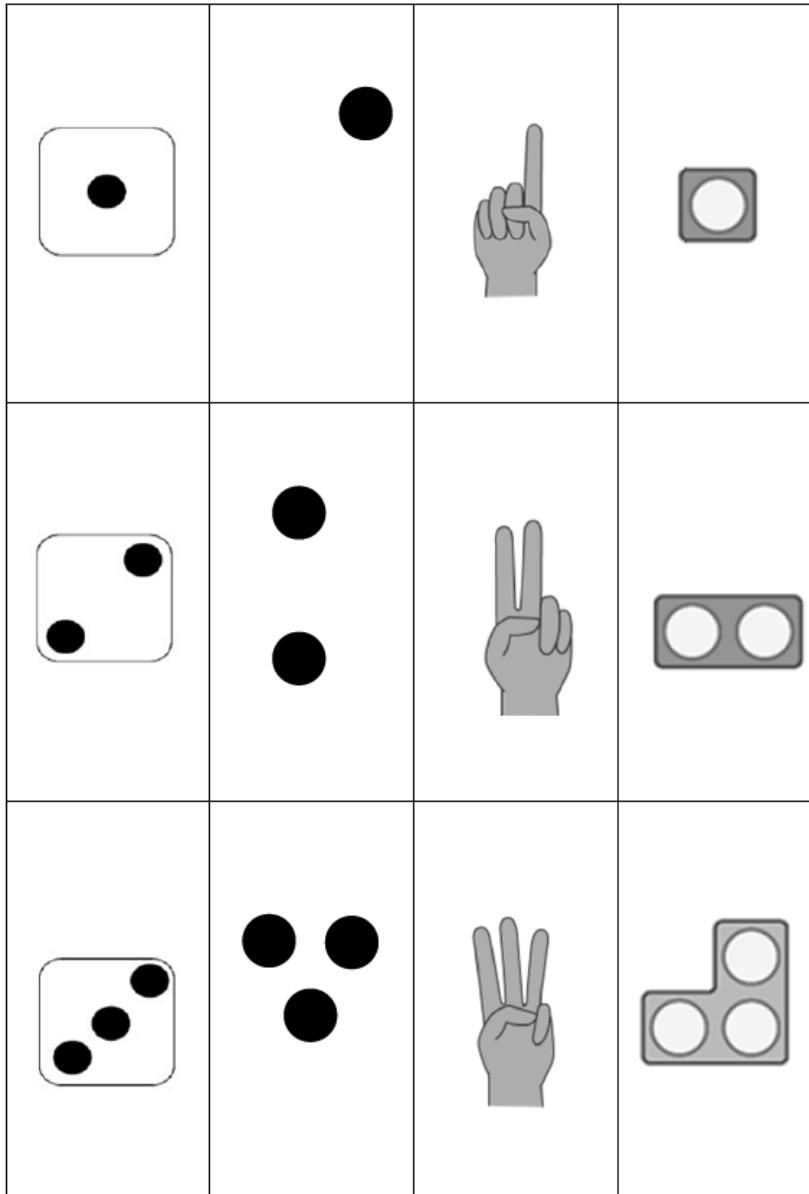
and that;

400 take away 100 is 300

Play 'Subitising to 3 snap'

Don't count, say the amount!



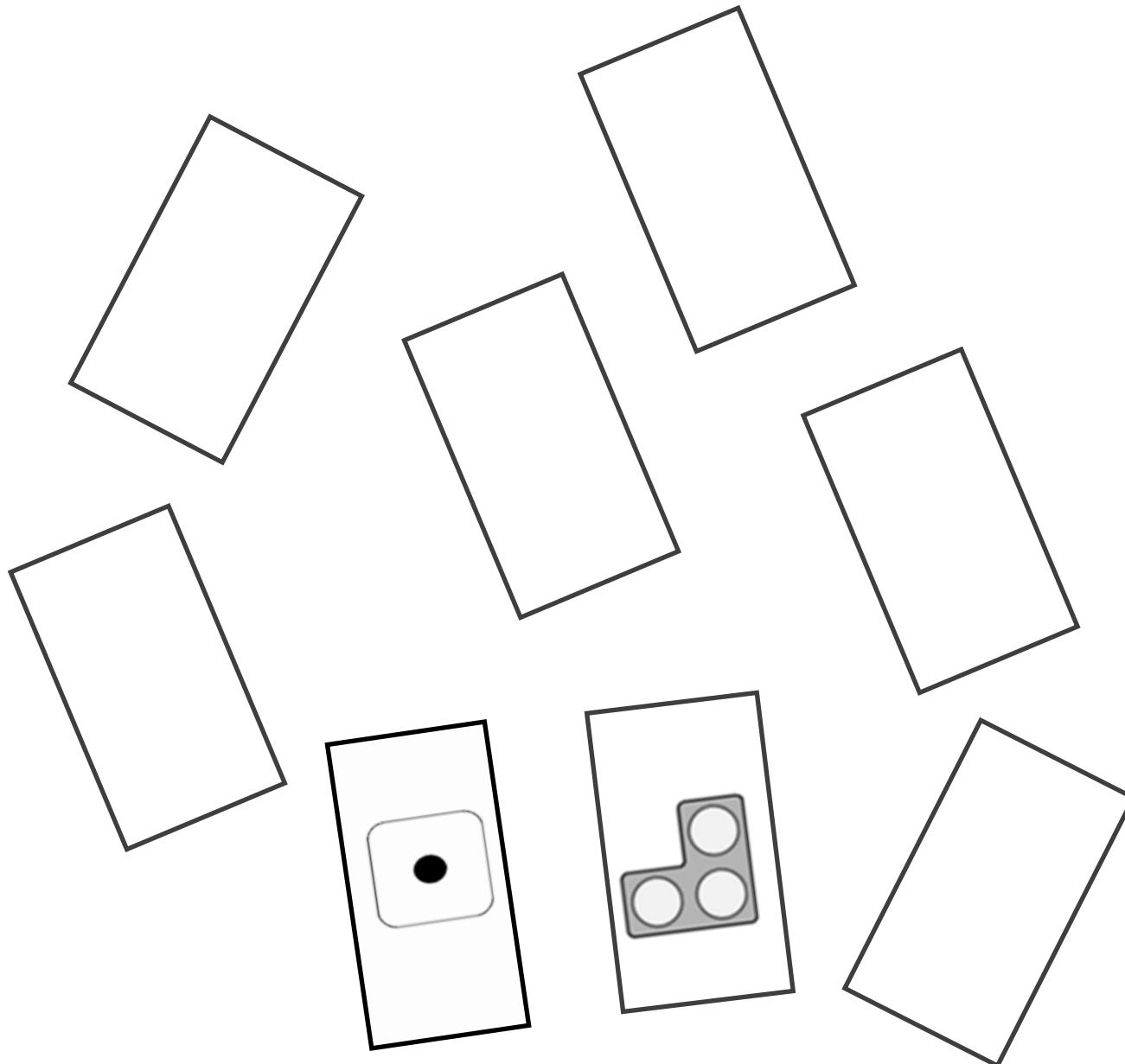


Grown-ups:

Please cut these into 12 separate cards and hand them to your child.

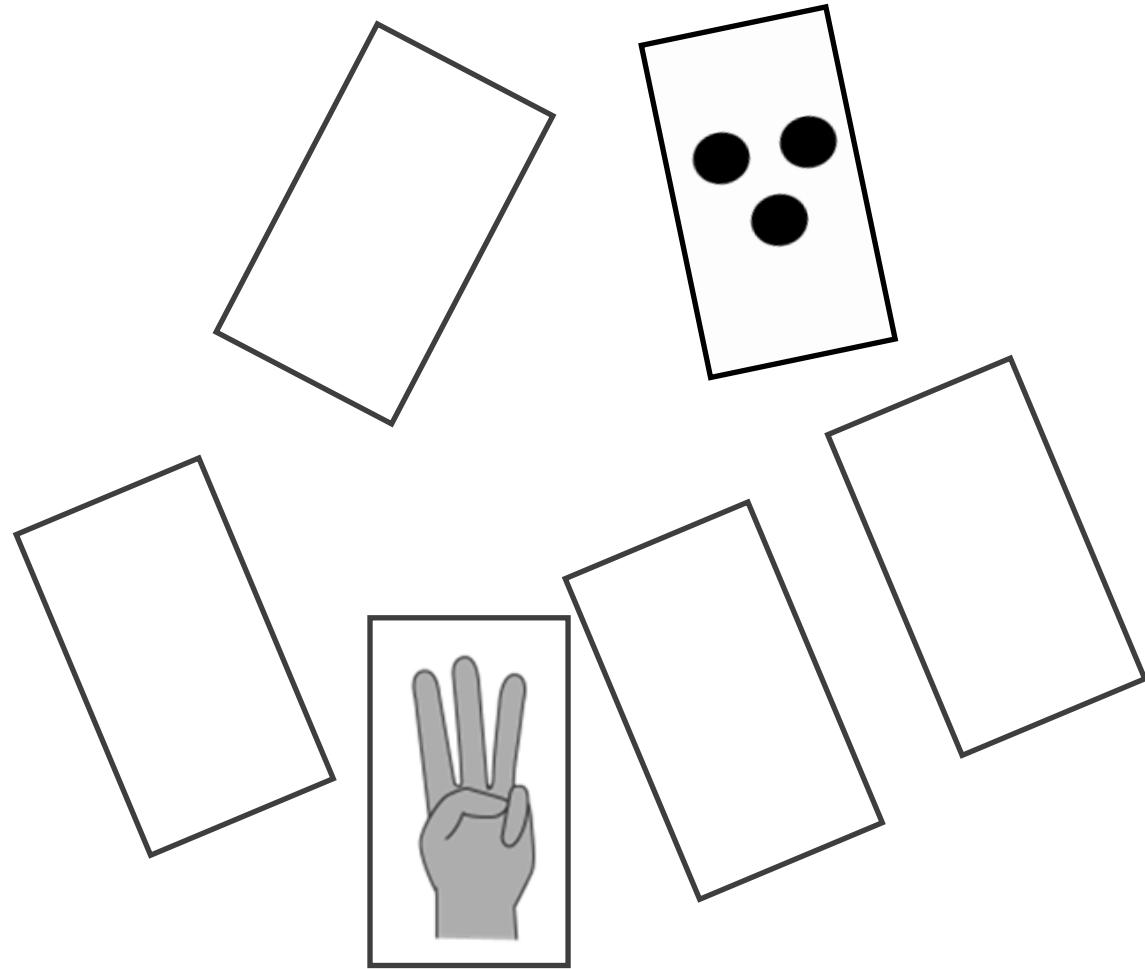
Children:

Please spread the cards out and place them ***face-down*** in front of you. (Ask the grown-up for help if unsure).



Take turns to turn two cards over and say the number you can see.

If the numbers do not match, place them back and try to remember where they are in case you need them later.



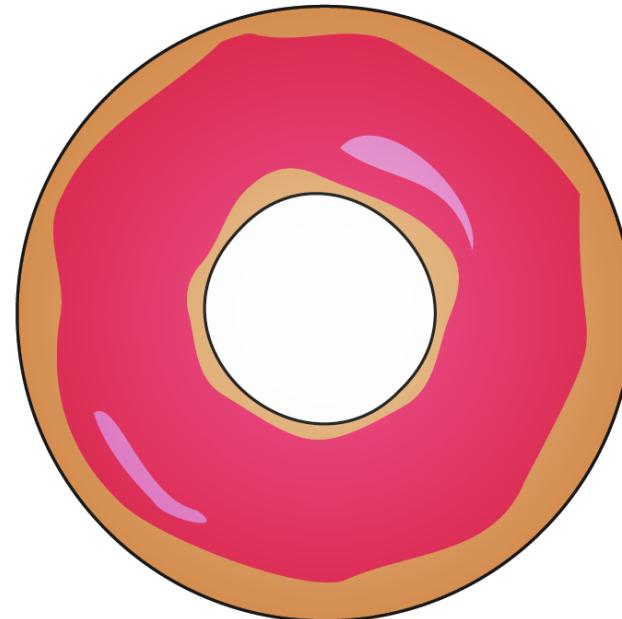
In Weeks 3 and 5, you will receive extra cards to practise subitising with bigger numbers. Don't throw your cards away!

When it is your turn, if you turn over two cards that are the same, you can keep them.

The winner is the person with the most cards when they are all used up.

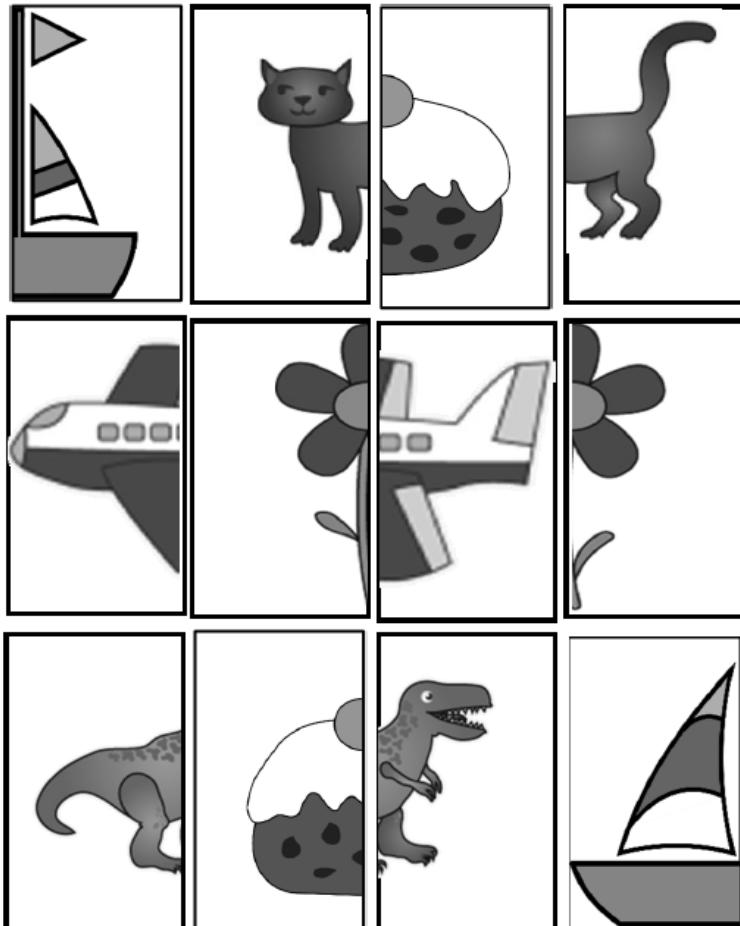
Play ‘Part-part-whole’

The ‘hole’ in the donut?



A ‘whole’ donut?

Find 2 parts that make a **whole**.



Cut carefully around each of the images.

Lay the cut cards face-up on a flat surface in front of you.

Take it in turns with the grown-up.

Look for two images that look like they are part of a whole.

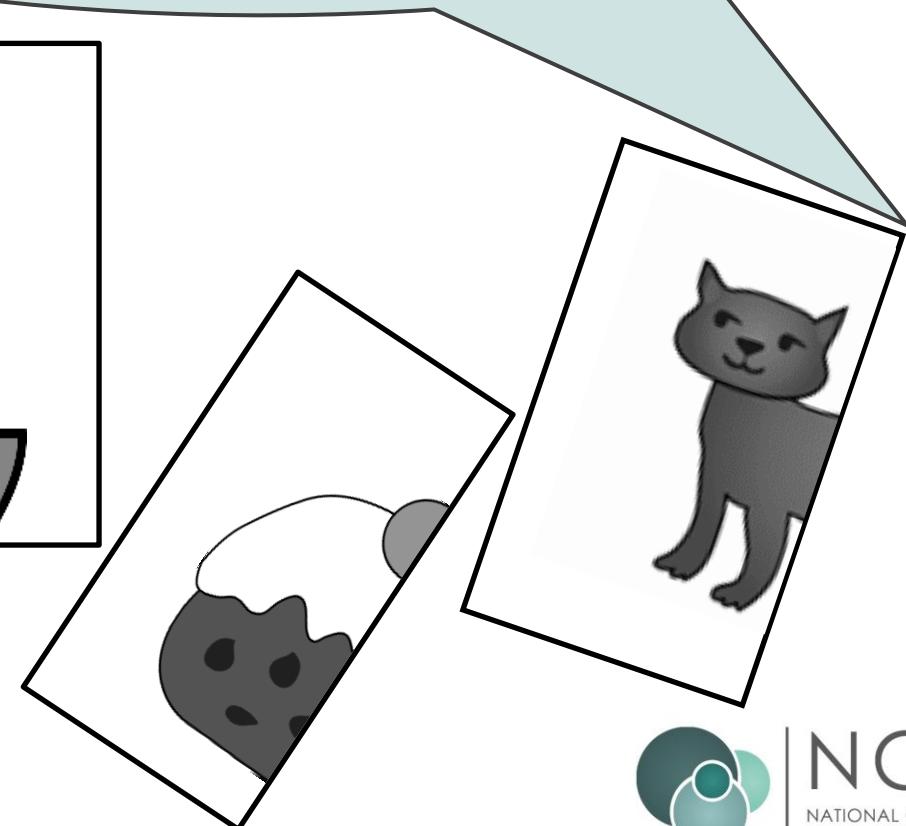
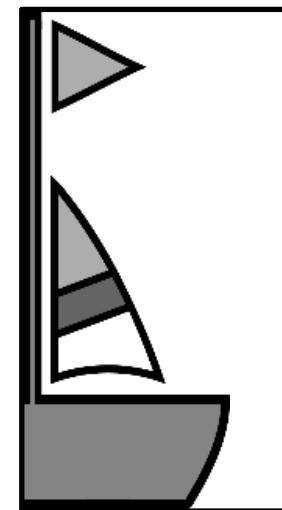
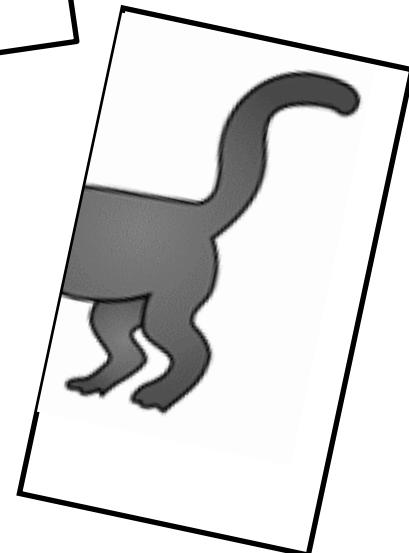
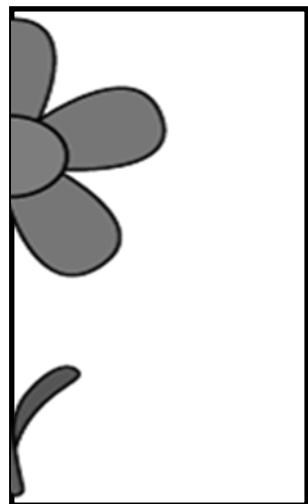
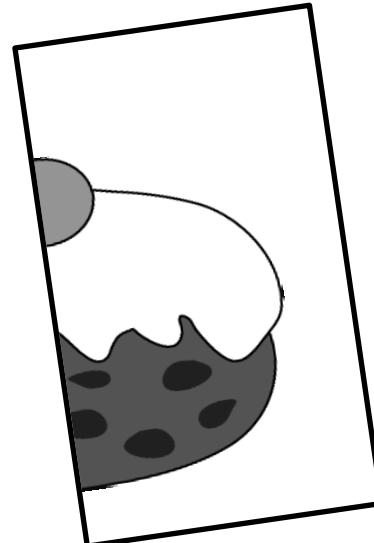
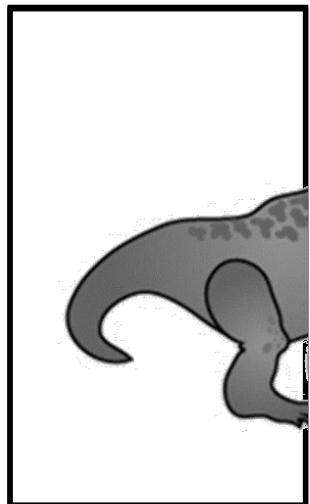
Pick them up and say 'part' 'part'.

Put them together and say 'whole.'

Grown-ups will need to carefully cut out these cards.

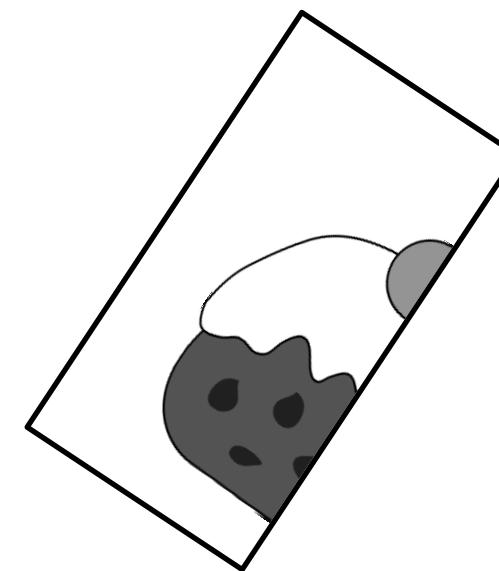
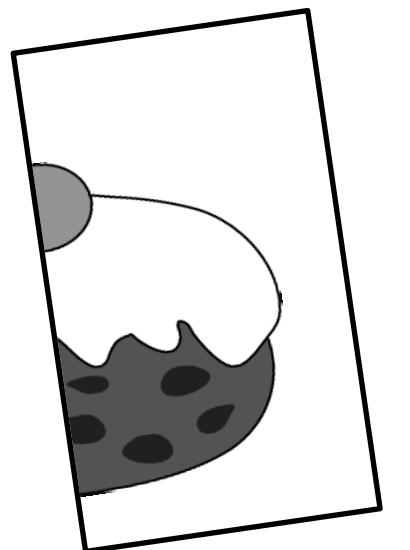
Children: place the cards **face-up** so you can see the pictures and spread the cards out in front of you.

Can you see two *parts* that make a *whole* image?



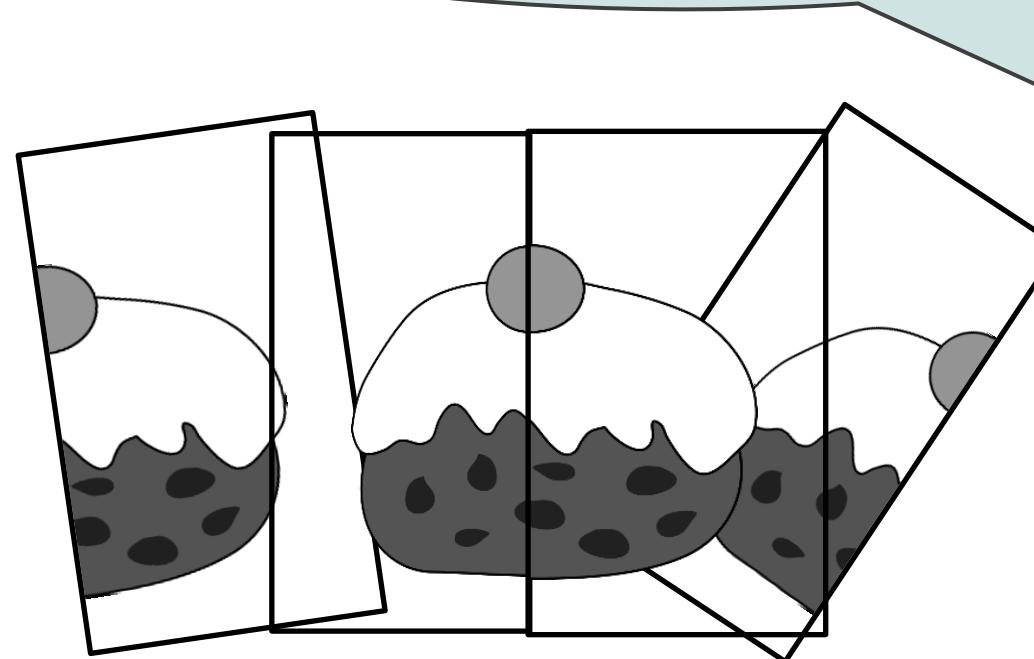
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Pick up each piece and say:
'part... part...'

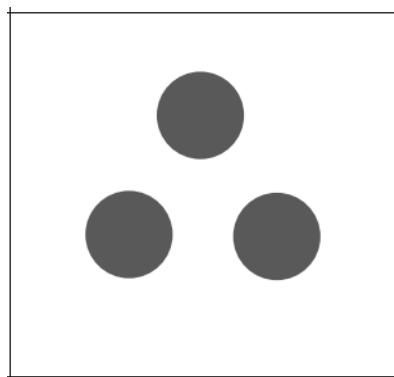
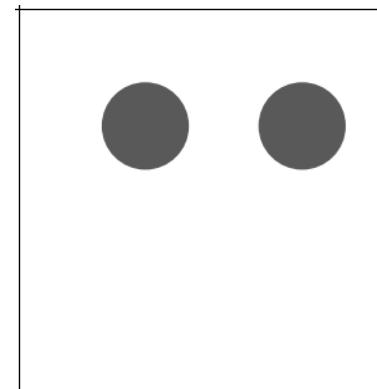
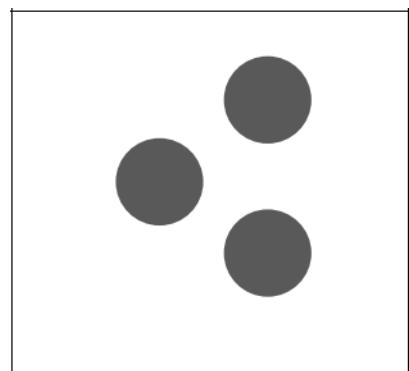
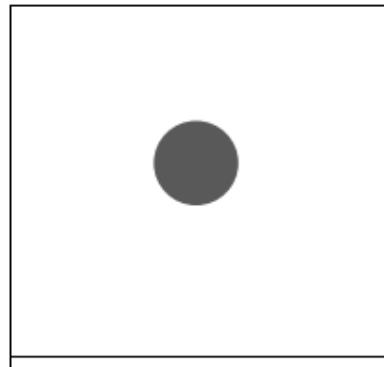
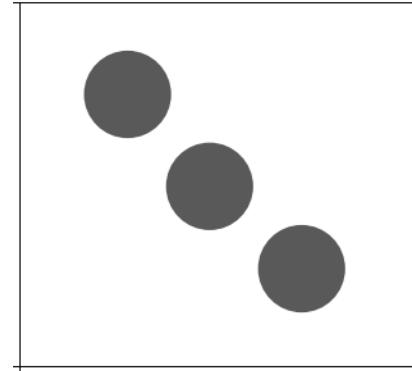
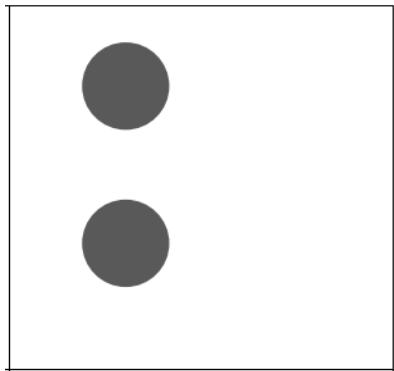


Now put them together and
say: 'whole!'

Can you find all the
'wholes' by doing
the same?



Part-part-whole with dots



In Week 3, you will play ‘part-part-whole’ with dots.

One person will pick up a card, and the other person must pick up the card that will ‘make 4’.

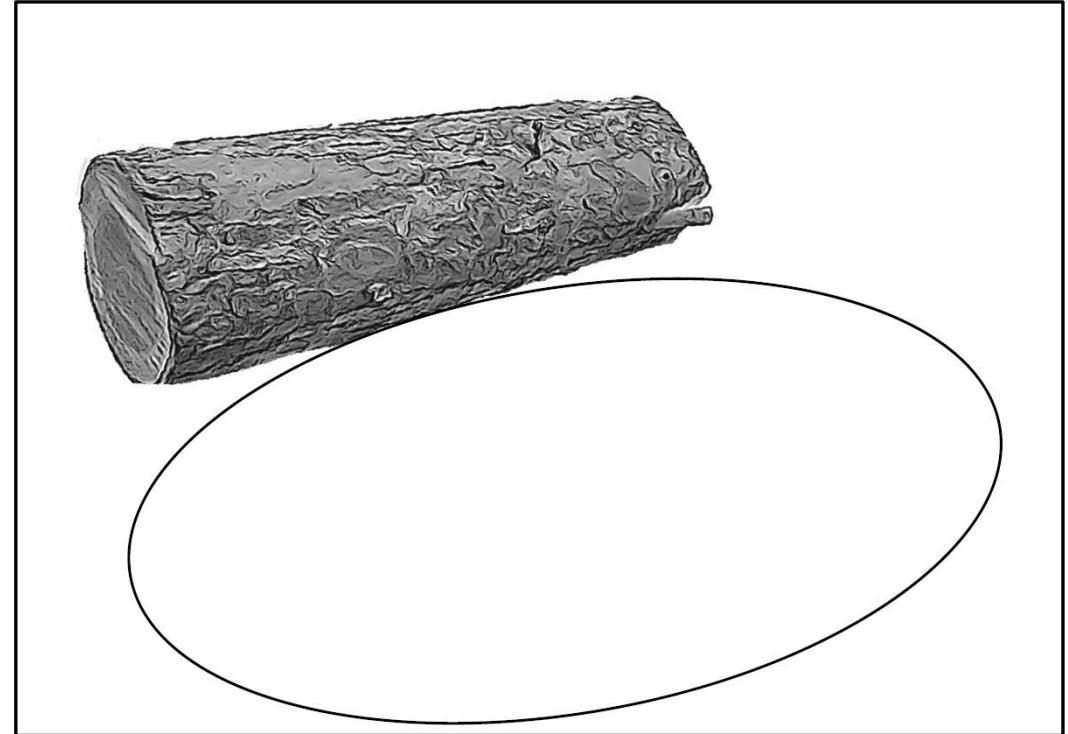
Play '3 frogs on a log'

You will need...



3 frogs
(counters)

The frogs on a log sheet



You will also need to show the numbers on your fingers!



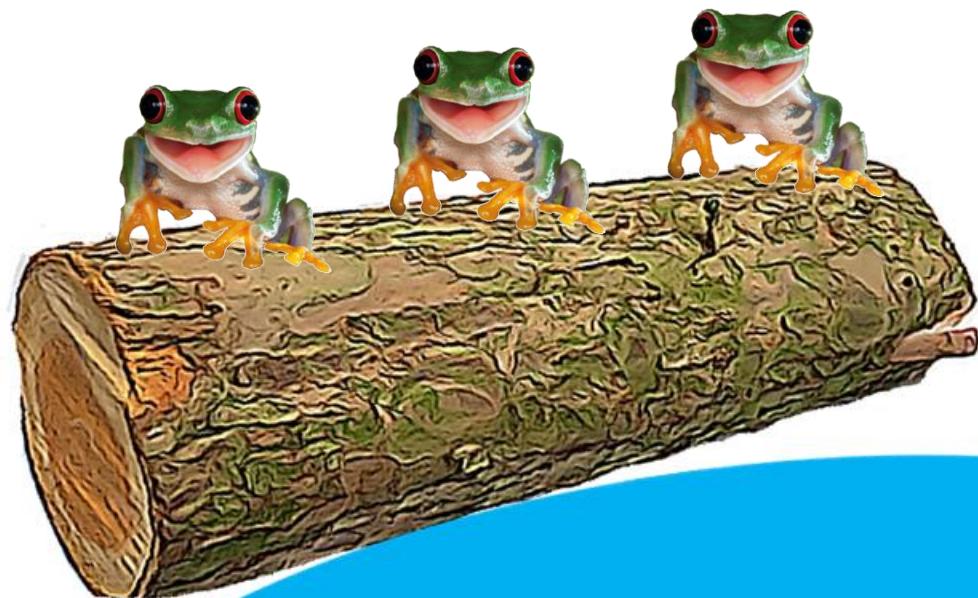
Put 3 frogs on the log



Ask your child

Show with your fingers:
How many are on the log?
How many in the pool?
How many altogether?

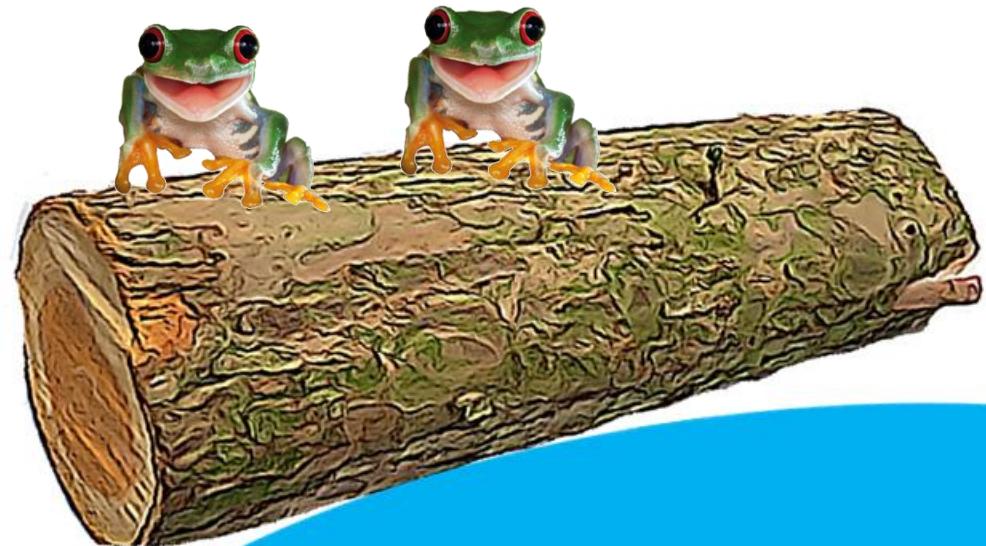
Put 1 frog in the pool.



Ask your child

Is it still three?
Show with your fingers:
How many are on the log?
How many in the pool?
How many altogether?

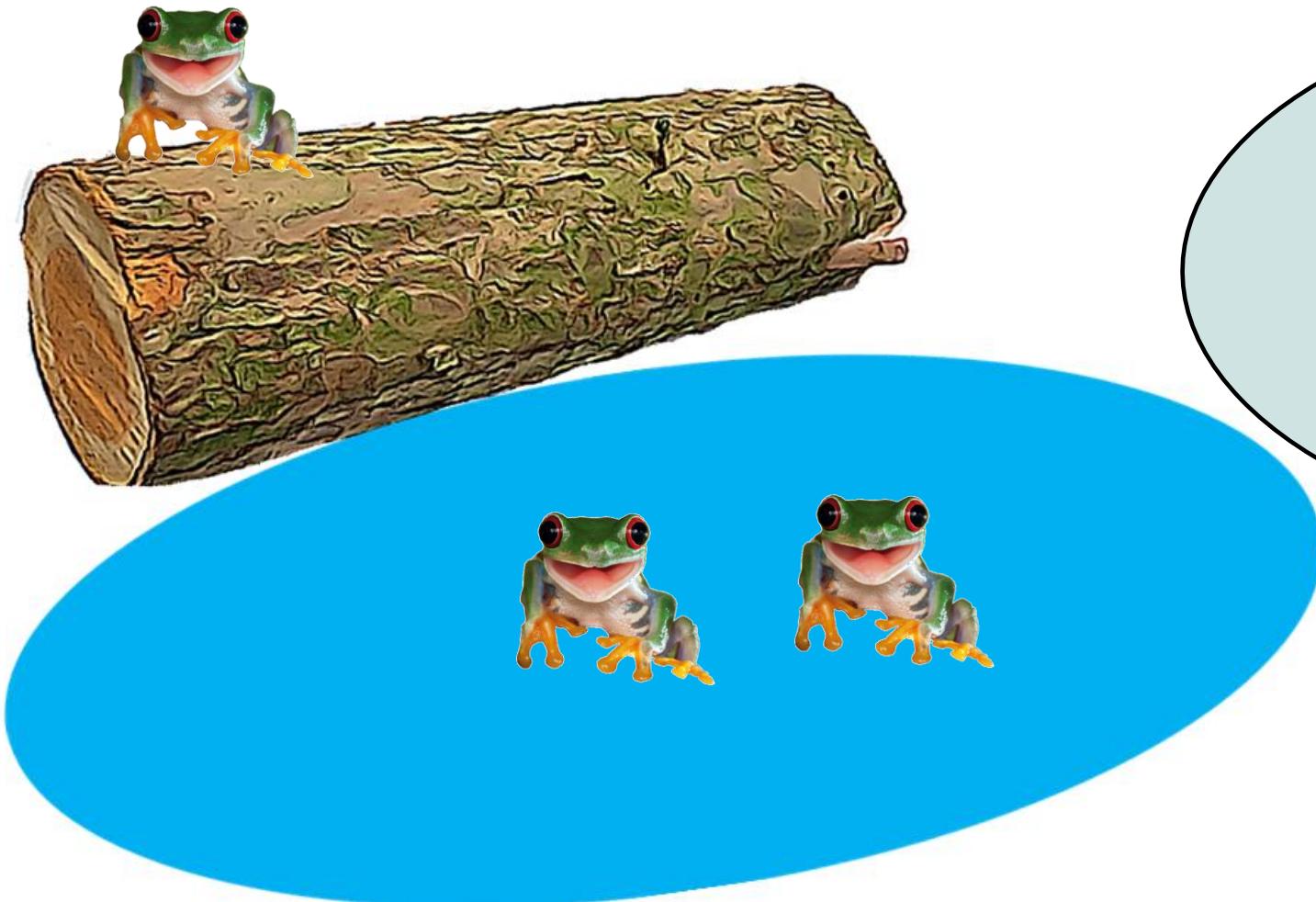
Put another frog in the pool.



Ask your child

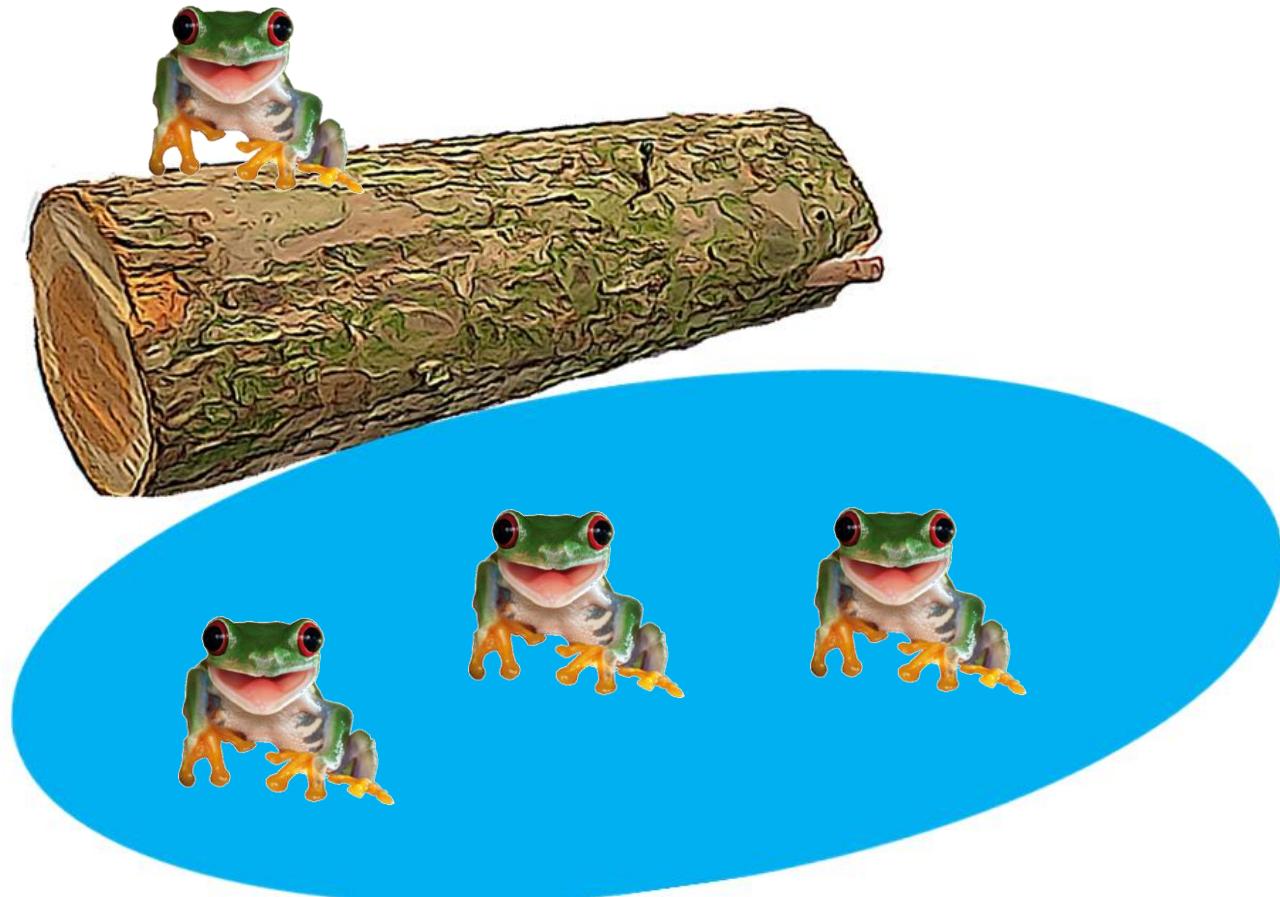
Is it still three?
Show with your fingers:
How many are on the log?
How many in the pool?
How many altogether?

Put another frog in the pool.



Ask your child

Is it still three?
Show with your fingers:
How many are on the log?
How many in the pool?
How many altogether?



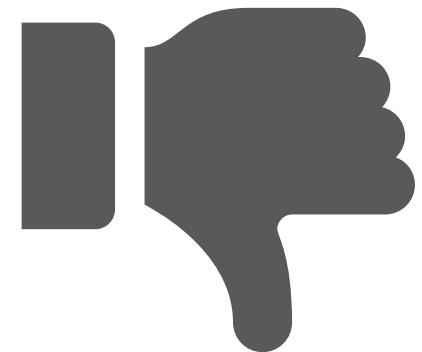
In Week 4, you will play this game again with 4 frogs... or even 5!

Play '3 or NOT 3?'

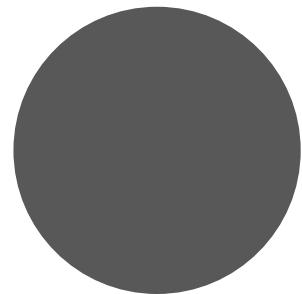
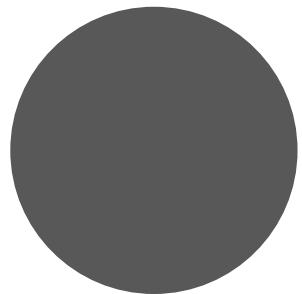
This activity involves spotting when there are 3 of an object or explaining why there are NOT 3.



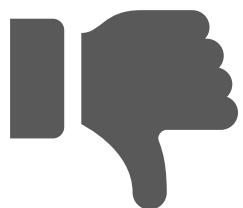
Put your thumb UP if you can see 3, and down if it is NOT 3.

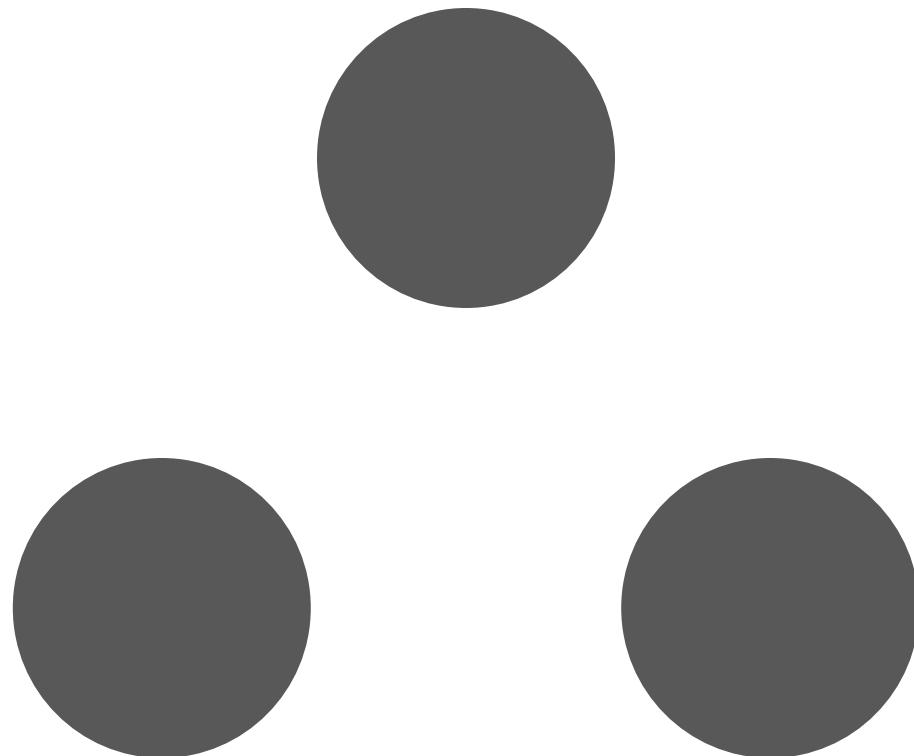


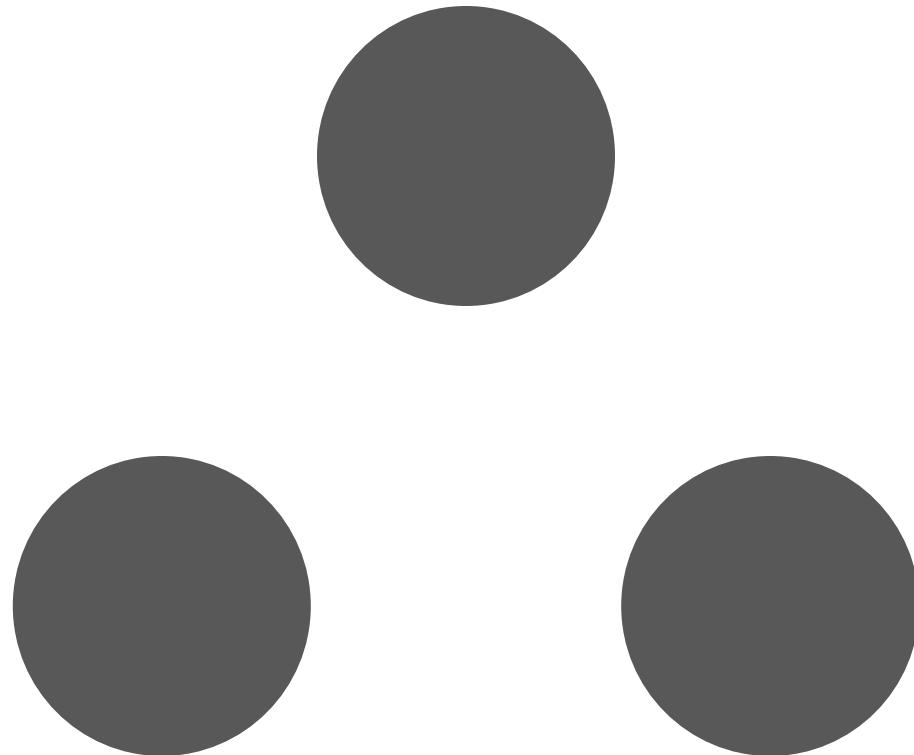
(Image © Alphablocks)

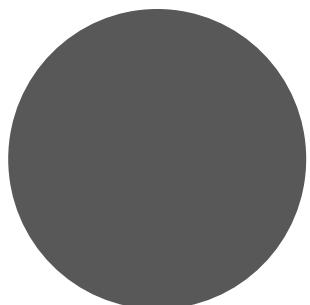
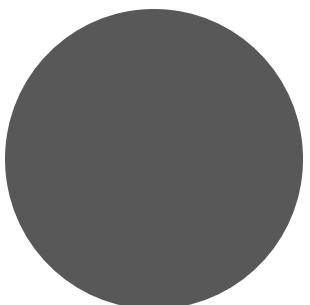
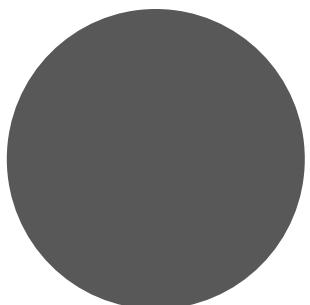


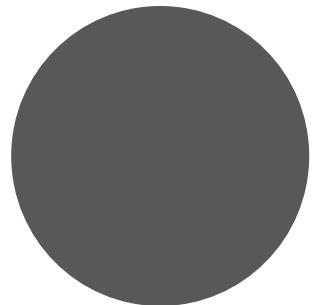
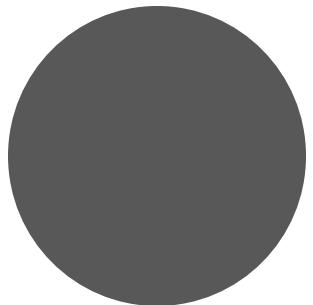
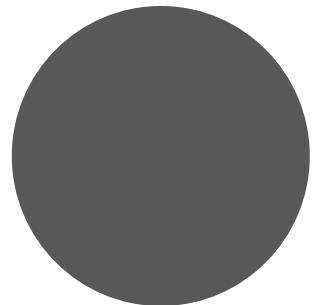
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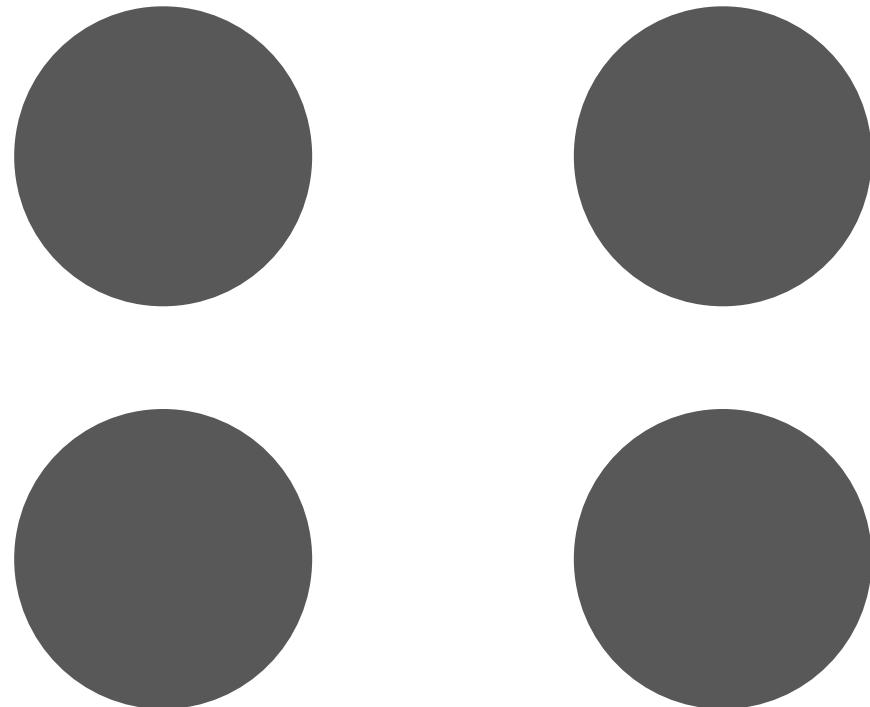


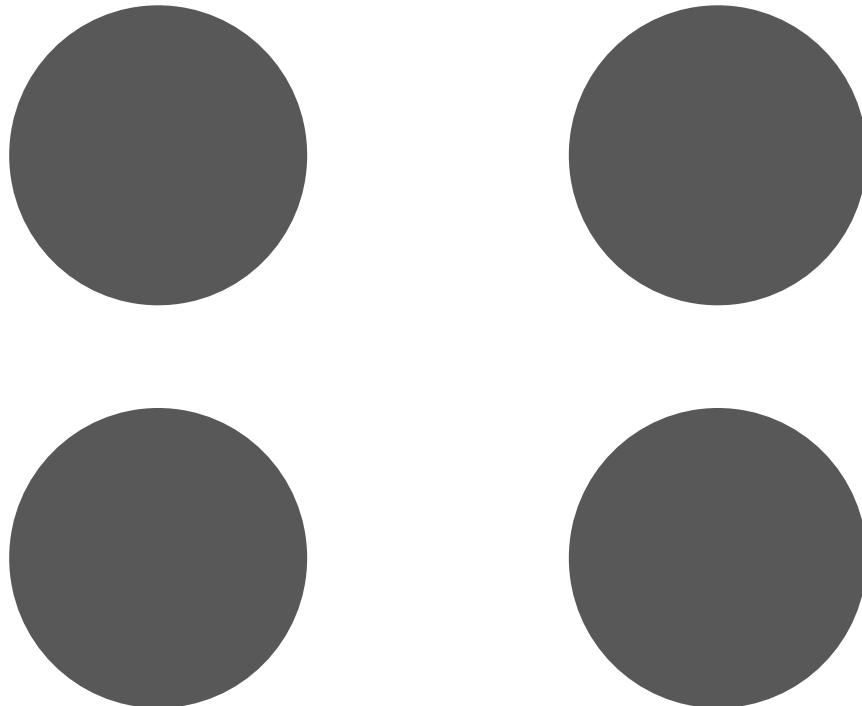
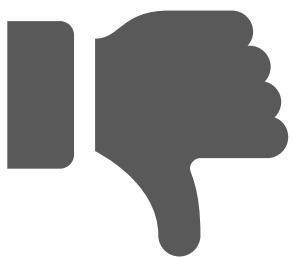


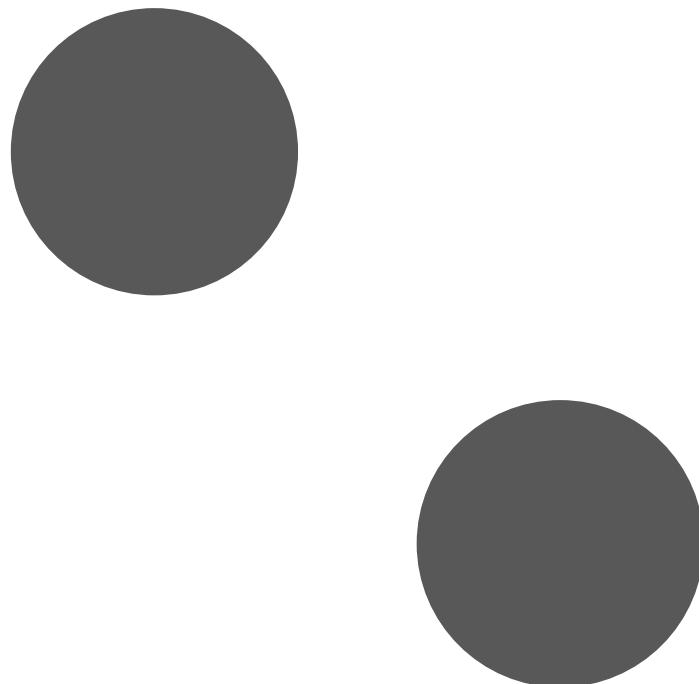


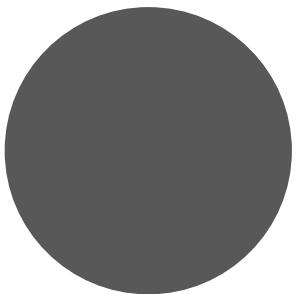
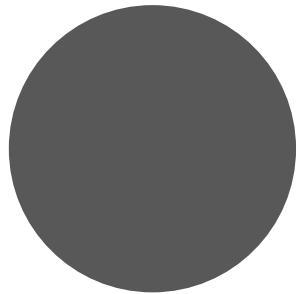
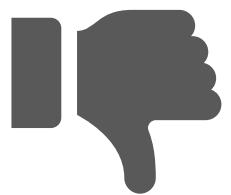


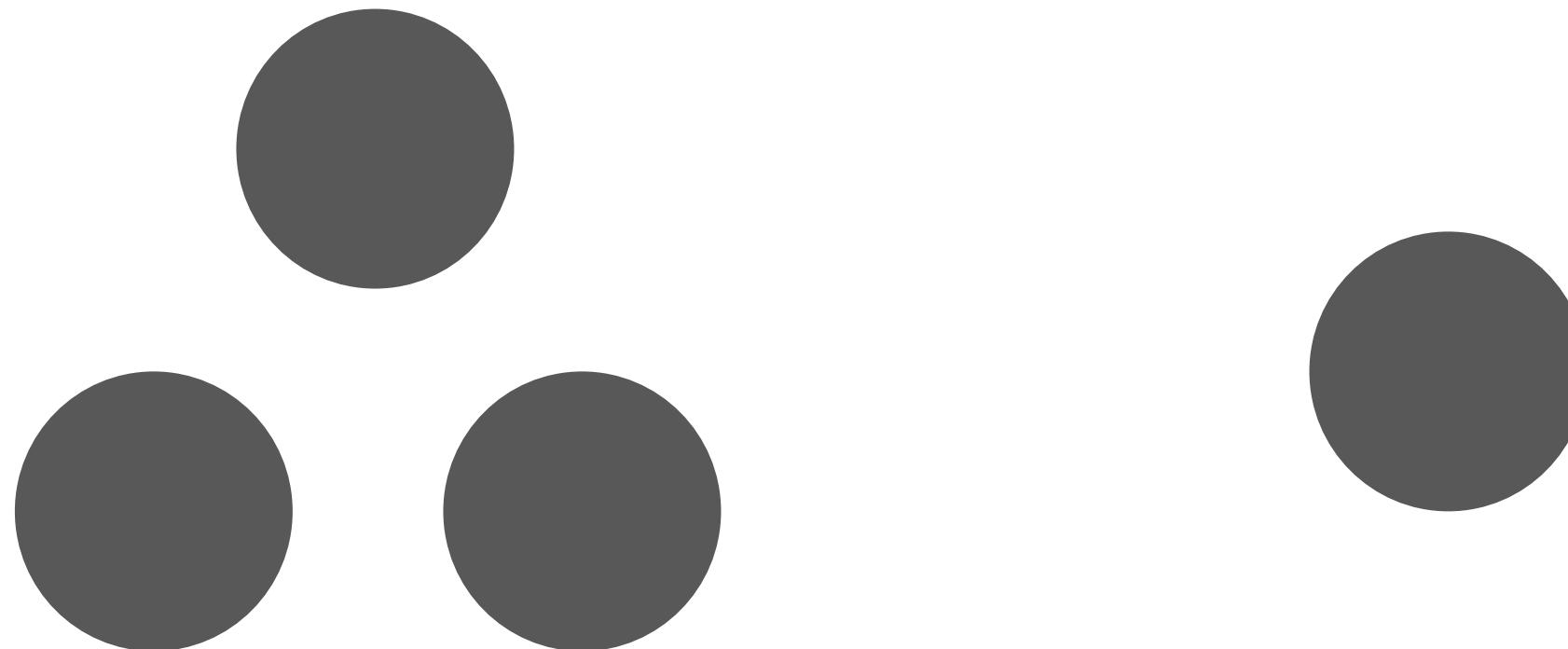
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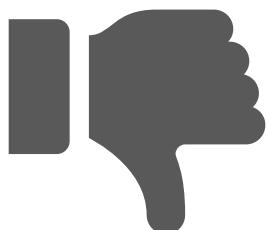
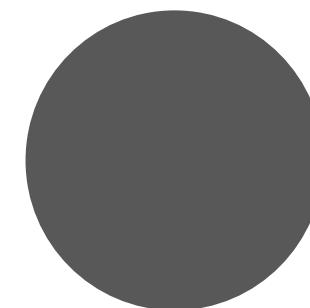
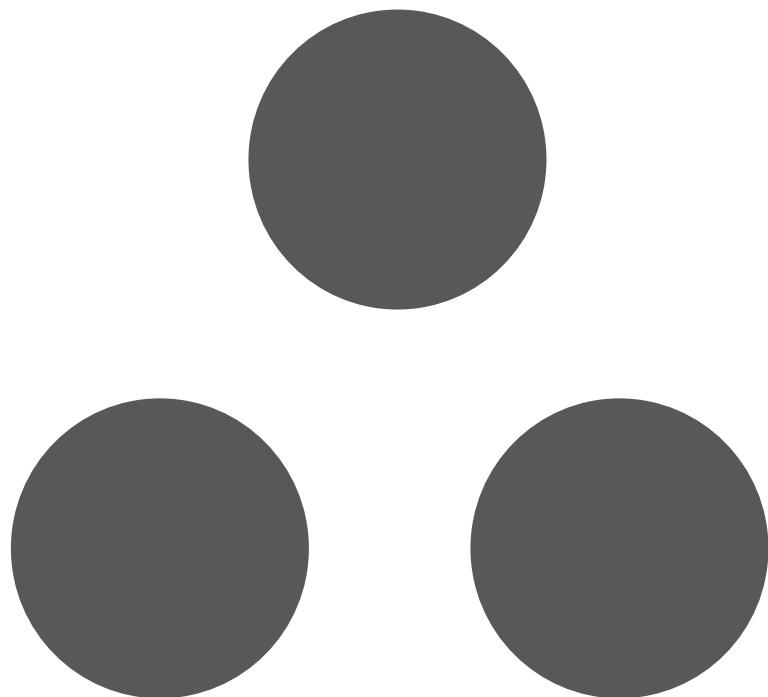


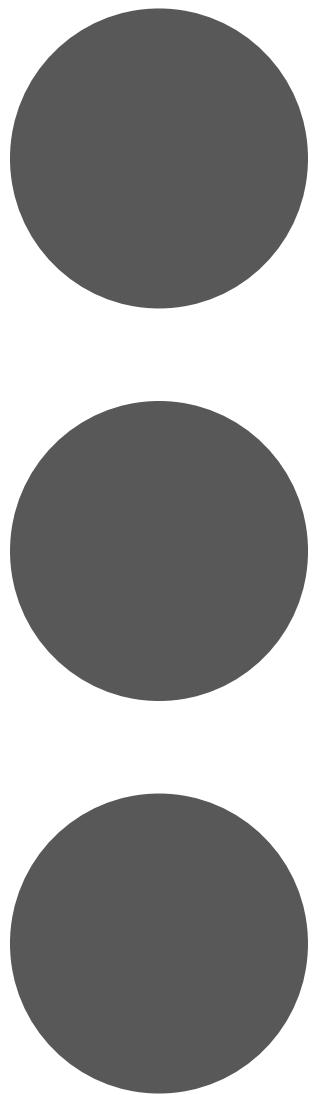


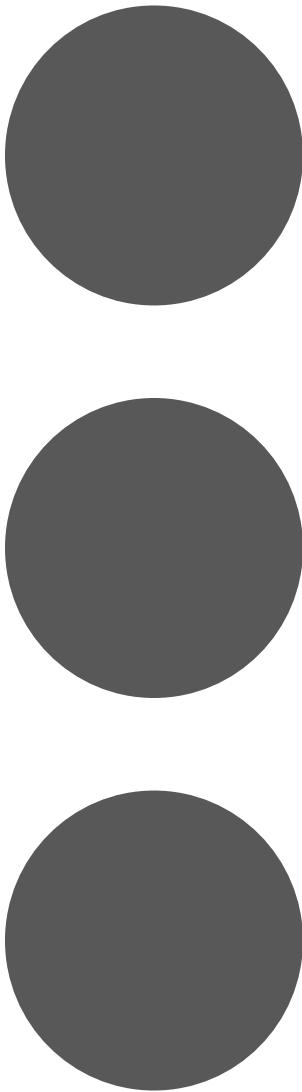
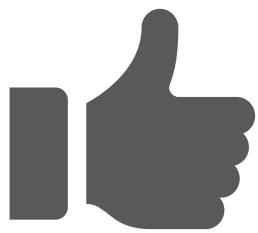






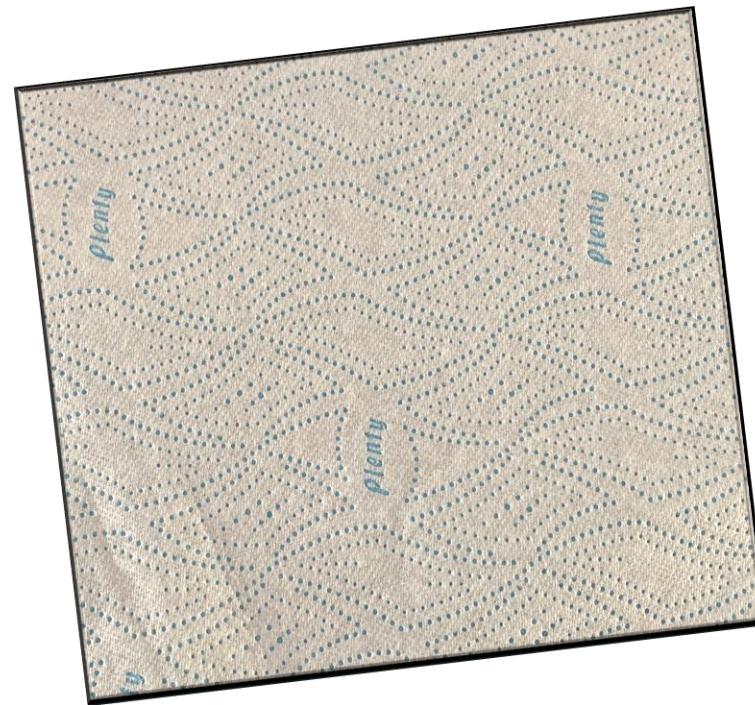
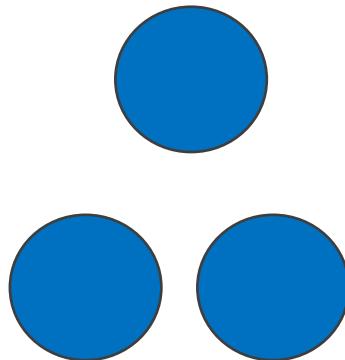




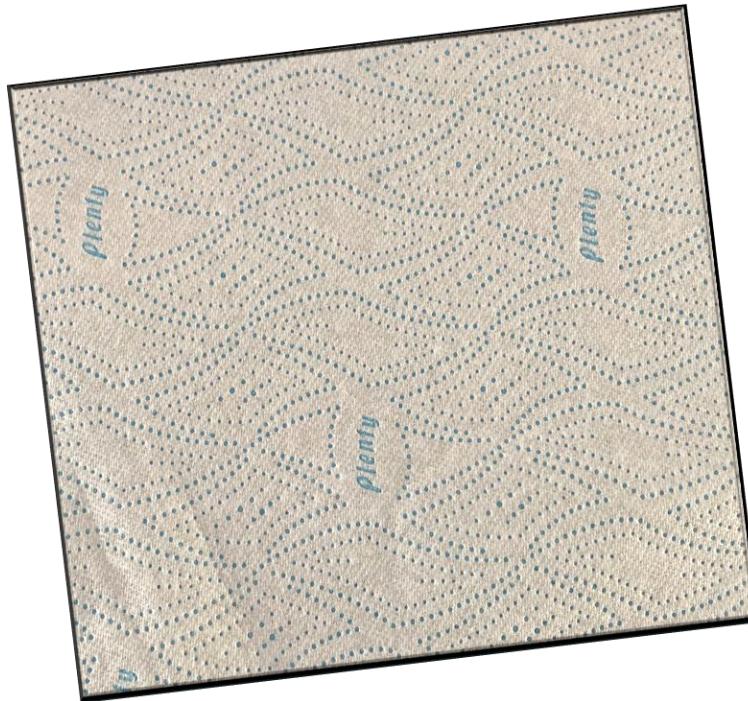


Play '3 or NOT 3?' with counters

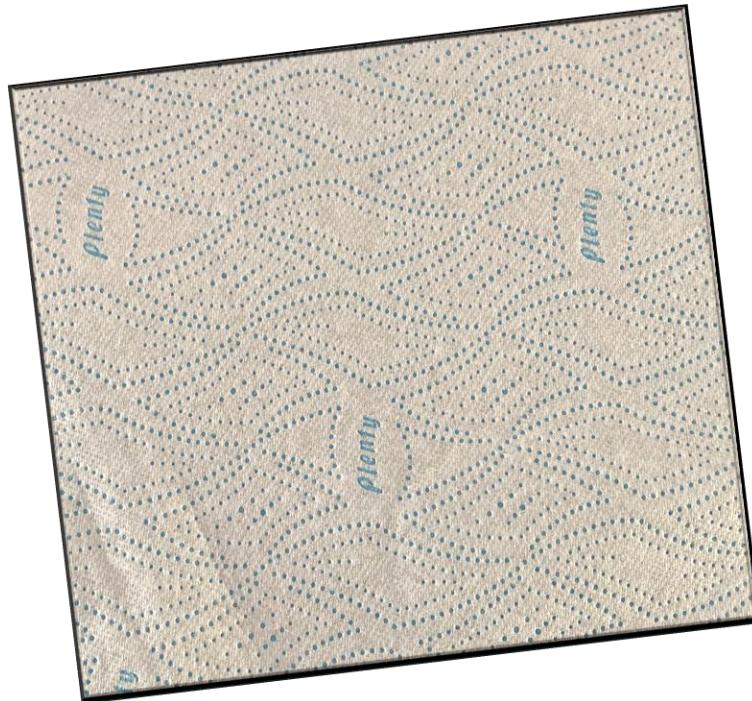
You will need 5 counters and something to cover them.



Grown-ups, hide some counters under the towel.

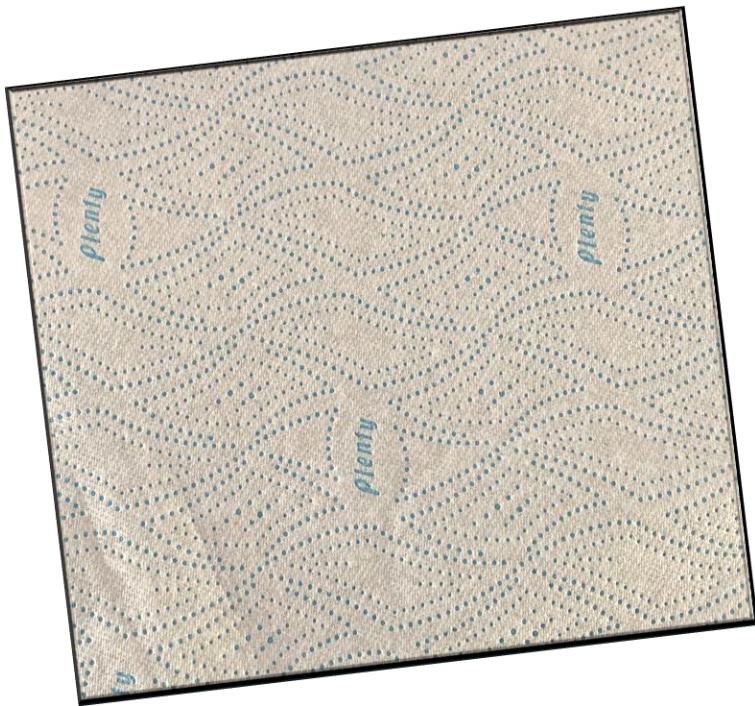


Reveal them quickly and ask your child...



3 or not 3?

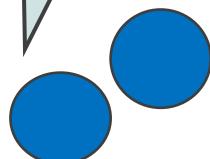
In Week 4, you will try this with different numbers...



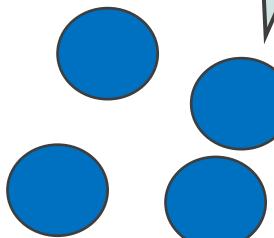
4 or not 4?

Now ask: 'What do you need to do to make it 3?'

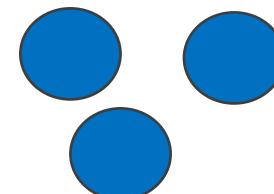
I need to add 1 more
to make 3.



If I take 1 away it will
make 3.



This is already 3!



Home Learning

You are going to take all the games we made today home with you.

The home learning for this week is set out on a sheet with instructions. You will get a new sheet and some new activities each week.

Mastering Number at Home

Reception – Week 1

Play 'Subitising to 3 Snap'



(Monday, Wednesday and Friday)

How to play

- Cut out the subitising cards on the worksheet 'Subitising to 3 Snap'.
- Place the cards face-down on a flat surface.
- Take it in turns to turn over 2 cards at a time. Say the numbers you see on each card.
- If the numbers are the same, the player taking the turn wins the cards. If the numbers are different, the player must turn the cards face-down again.
- The winner is the player with the most cards at the end of the game.

Play the 'Part–part–whole game'



(Tuesday and Thursday)

How to play

- Cut out the image cards on the worksheet 'Part–part–whole game'.
- Place the cards face-up on a flat surface.
- Take it in turns to pick 2 cards that make a whole.
- Say, "part, part", as you pick up the cards, and "whole" as you put them together to make the complete image.

Other things to try at home

Hiding games

Hide up to 3 objects, such as acorns, blocks or small toys, under a tea towel, or under your hand. Quickly reveal the objects, then hide them again, saying, "How many?" Can your child subitise the amount without counting?

Be '2-spotters'

Ask your child to spot things at home that there are 2 of. Some things are often found in 2s, such as shoes or socks, but we can have 2 of anything!



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Mastering Number at Home

My Diary – Reception, Week 1

Please complete your diary with your grown-up every day.

Name:

Day	Activities completed (please tick)	✓	Grown-ups – comment about your child's learning
Mon	We played 'Subitising to 3 Snap'.	✓	Played the game with Aunty Jane. Found it tricky but it was fun.
Tues	We played the 'Part-part-whole game'.		
Wed	We played 'Subitising to 3 Snap'.		
Thurs	We played the 'Part-part-whole game'.		
Fri	We played 'Subitising to 3 Snap'.		

Grown-ups – please indicate how you and your child found the work this week.

Very confident



It was okay



Not too sure



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References:

Axford, N., Berry, V., Lloyd, J., Moore, D., Rogers, M., Hurst, A., Blockley, K., Durkin, H. and Minton, J. (2019) How Can Schools Support Parents' Engagement in their Children's Learning? Evidence from Research and Practice. London: Education Endowment Foundation.

Desforges, C. & Abouchaar, A. (2003), The impact of parental involvement, parental support and family education on pupil achievement and adjustment: A literature review. London: Department for Education and Skills.

Goodall, J & Vorhaus, J (2011), Review of Best Practice in Parental Engagement. Department for Education.

Sarjeant, S (2021) Engaging parents in children's literacy: an investigation into the Impact in Writing programme as a strategy for parental engagement. Available at:
[https://orca.cardiff.ac.uk/id/eprint/136692/3/1576474%20Suzanne%20Sarjeant%20-%20Final%20thesis%20\(002\).pdf](https://orca.cardiff.ac.uk/id/eprint/136692/3/1576474%20Suzanne%20Sarjeant%20-%20Final%20thesis%20(002).pdf) (Accessed 03.10.2022)

Thank you!



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