



For helping your child learn their number bonds

Children should know the pairs of numbers that make 10 by heart → Children should know the pairs of numbers that make 20 by heart → Children should know or work out using what they know the pairs of numbers that make 100


1. Use fingers or objects to check number bonds - 4 fingers up, 6 fingers down, 18 red marbles, 2 green marbles.
2. Separate 10 or 20 objects in different ways - "if I have 14 pieces of lego, how many must you have?"
3. Sing number bond songs e.g. 'What makes 10' to the tune of Pop goes the Weasel - sing these songs in the car, when tidying up, while getting ready for school etc
4. Play 'Rock, Paper, Number Bond'. You hold up and say a number of fingers - your child holds up and says the number of fingers that added to it makes 10.
5. Play 'Quick Fire Number Bonds'. You say a number and your child replies with the number that added to it makes 10/20/100. Try playing competitively and scoring points against each other or seeing how many your child can do within 1 minute.
6. Play 'Number Bond Snap'. Write numbers on pieces of paper or use playing cards. Take it in turns to turn over a number - call "snap" when 2 numbers that make 10/20 are placed on top of each other.
7. Play 'Number Bond Pairs'. Write numbers on pieces of paper or use playing cards. Take turns to turn over 2 numbers, if they make 10 keep them; the winner has the most pairs at the end of the game.
8. Play 'If I know, then I know...' See how many facts your child can work out from a simple fact in a given amount of time e.g. If I know $3 + 7 = 10$, then I know $7 + 3 = 10$, $10 - 7 = 3$, $10 - 3 = 7$, $17 + 3 = 20$, $30 + 70 = 100$, $100 - 70 = 30$.
Alternatively give your child the answer e.g. 20 and ask them to write as many questions as they can to go with it.
9. Use Apps such as 'Number Bond Blasters' or 'Hungry Fish'. There are lots of apps specifically designed to support number bond recall simply search 'number bond' or 'primary maths' - many are free!
10. Play online games such as:
<http://www.ictgames.com/numberFacts.htm>
<http://www.iboard.co.uk/iwb/Alien-Pairs-to-10-733>
<http://www.amblesideprimary.com/ambleweb/mentalmaths/numberbond.html>
http://www.mathplayground.com/number_bonds_10.html
<http://www.ictgames.com/10pipe.html>

Top 10



For helping your child develop their counting skills

Children should count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number \Rightarrow Children should count in multiples of twos, fives and tens \Rightarrow Children should count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward

1. Build counting into everyday routines - encourage your child to count the stairs as they go up/ down stairs, count how long it takes to travel to school, count how many pieces of lego they used to build a model. Sing counting songs.
2. Encourage your child to count objects as well as simply counting by rote. Initially support your child in moving each object 1 at a time into a line to count, then show them how they can just touch each object as counting. As your child grows in confidence they can group objects and count them in 2s, 5s and 10s.
3. Count movements and sounds as well as objects. Play a game where your child closes their eyes and you drop objects into a pot. Check how many there are by counting together.
4. Count backwards with your child more than you count forwards - for example when counting for your child to complete a task count back from 10 rather than to 10!
5. Once your child is confident counting to and from the 10s numbers practice counting from and to non boundary numbers e.g. From 7 to 28 and back again.
6. When your child is confident counting in 1s count with them in 10s, 2s, 5s and 3s. Count objects that are naturally in these groups in this way e.g. Count fingers on hands in 5s, socks in 2s etc.
7. Help your child to count in 2s by 'shout/whisper counting'. Whisper odd numbers and shout even numbers 1 2 3 4 5 6. Gradually move so you nod instead of whispering and then so you are simply counting in 2s. Again ensure you count backwards in steps as well as forwards!
8. Help your child to count in 2s, 5s or 3s by 'clap counting'. Say the numbers you need and replace the others with a clap. The clap can be replaced with any other sound or action! Encourage your child to 'think' the number for each clap.
9. When buying or making games to play with your child try to find those which show numbers in lots of different ways e.g. 5 not only being shown as 
10. Board games and dominoes are an excellent means of supporting your child's counting skills. Jumping along a game board supports your child's ability to count jumps along a number track or number line.





For helping your child understand the number system

Children should read and write numbers from 1 to 20 in numerals and words. → Children should compare and order numbers from 0 up to 100 and know that = means is equal to/ the same as → Children should recognise the place value of each digit in a two-digit number (tens, ones)

1. Show your child how to write their numbers in the correct formation -rhymes such as "make an s and do not wait, when it's joined you have an 8". Please note over writing dotted numbers is harder than copying for some children.
2. Talk about = as meaning 'the same as'. An old fashioned set of balance scales can help with this concept -put the same quantity of things on each side and see how it is "balanced" "equal" "the same"
3. When counting more than 10 objects encourage your child to group the objects into groups of 10 and 'extra' ones. Show them how this links to the way we write the number -how many groups of 10, how many ones?
4. Try not to talk about numbers as digits e.g. telling them to write 34 as "a 3 and a 4", instead try saying "it's 3 tens and 4 ones".
5. If your child reverses the digits in 2 digit numbers (a normal stage of development!) try writing T U (standing for tens and units) faintly above where they are writing as a prompt.
6. If your child reverses the digits in 2 digit numbers, read the number to them -is that what they wanted to write? If still confused count out both versions of the number to show the difference e.g. 12 and 21.
7. Play the comparison game -the nice version. Each player needs to draw

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The aim of the game is to make the largest number. Roll a dice/ pick a number card . Place the digit in a box. Take it in turns until all the boxes are full. The player with the largest number scores a point. The first player to 10 points wins.
8. Play the comparison game -the nasty version As above but players can choose whether to place a digit in their box or their opponents. Additional versions can be found at <http://wrich.maths.org/6605>
9. Use Apps such as 'Motion Math Zoom'
10. Play online games such as: <http://www.ictgames.com/dinoplacelvalue.html>
http://www.bbc.co.uk/schools/starship/maths/games/place_the_penguin/big_sound/full.shtml
<http://www.ictgames.com/sharknumbers.html>
<http://www.ictgames.com/LIFE GUARDS.html>
http://www.ictgames.com/arrowCards_revised_v6.html





For helping your child use mathematical language

(well 3 top tips and a list of mathematical vocabulary!)

1. Talk about your children's written calculations as 'number sentences' (when written horizontally) or calculations. The 'sum' is the total when adding. Children need to know how to work out "the sum of 32, 45 and 72" so talking about all calculations as "sums" can be confusing.
2. Try to use a range of terms when talking to your child about calculations.
3. use mathematical vocabulary yourself -including the terms for shape, measures, position and direction e.g. cube, sphere, left, right angle, litre.

$+$
add addition plus
more increase
double sum
total *altogether*

$-$
take away subtract
subtraction take
minus decrease *leaves*
difference between

\times
groups of *lots of*
multiply product
times tables *times*
multiplied by *makes*
factor multiple

\div
share *group*
divided by divisible by
divide *share equally*

A glossary of mathematical terms can be found at:

<https://www.ncetm.org.uk/public/files/17308038/National+Curriculum+Glossary.pdf>





For helping your child learn their times tables

Children should recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers → Children should recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables → Children should recall multiplication and division facts for multiplication tables up to 12×12 .

1. Support your child in learning one multiplication table at a time. Once they are confident with 3 or more tables try mixing them up
2. Aim for instant recall - your child should know a multiplication fact in 3 seconds.
3. Begin by encouraging your child to count in steps of the multiplication table they are learning. Move on to holding up their fingers as they count and then encourage them to say the complete multiplication table "1 times 7 is 7, 2 times 7 is 14..." Once they can do this hold up a random number of fingers for them to say the associated fact.
4. Sing multiplication songs - there are lots of these that can be downloaded, watched via youtube or bought on CD. We particularly like the Percy Parker CDs and the video at <https://www.youtube.com/watch?v=dzvyBQ5uTbo> is great for learning the 3 x table!
5. Work with your child to create 'Facts I know/ Facts I need to learn' packets. When your child can instantly and consistently recall a multiplication fact put it in the 'Facts I know' packet, then focus on a few of the trickier 'I need to learn' facts at a time - hold them up as flashcards or ask them the answer as often as you can throughout the day - little and often is the key!
6. Write the 'Facts I need to learn' that your child is focussing on on post it notes and put them around the house - on the bathroom mirror, on the fridge, on the TV screen!
7. Share some 'times table tricks', for example x4 by doubling, then doubling again; x8 by doubling 3 times. For x9 hold up both hands with your palms facing you - whatever you're multiplying (say 8) bend down that finger - the fingers to the left of the bent finger are the tens (7) and the right are the units (2) so the answer to 8×9 is 72. These will not help with rapid recall on their own but can be a useful part of the learning process.
8. Play times tables top trumps - available on request from school or make up your own version!
9. Show your child how to make and then play 'Multiplication Fortune Teller'





For helping your child learn their times tables

10. Play online games such as:

<http://learn-timestables.com/tafels-oefenen.aspx>

<http://www.topmarks.co.uk/maths-games/7-11-years/times-tables>

<http://resources.woodlands-junior.kent.sch.uk/maths/timestable/interactive.htm>

<http://www.learnyourtables.co.uk/en/index2.htm>

<http://www.maths-games.org/times-tables-games.html>

<http://www.bbc.co.uk/skillswise/topic/times-tables>

Or use Apps such as 'Squeebles Times Tables', 'Bubble Pop Multiplication' or 'Grand Prix Multiplication'. There are lots of apps specifically designed to support times table recall simply search 'times table' or 'primary maths' - many are free!





For helping your child solve problems mentally

Children should add and subtract numbers mentally, including a 3-digit number and 1s, a 3-digit number and 10s, a 3-digit number and 100s → Children should add and subtract numbers mentally with increasingly large numbers. Children should use place value, known and derived facts to multiply and divide mentally → Children should multiply and divide numbers mentally drawing upon known facts. Children should perform mental calculations, including with mixed operations and large numbers.

1. 'Talk maths' at home and in everyday life. Speak to your child about when, where, how and why you have to work mathematically - talk through your own mathematical workings so that your child can 'see' the process you go through mentally.
2. Try to talk positively about mathematics! If you had a negative experience of maths at school or feel that it is not your strength it can be easy to make maths sound hard or expect that your child will struggle in this area. Developing a positive learning attitude in a subject goes a long way towards success!
3. Involve your child in everyday tasks that require mental mathematical working. Let them take charge of paying at the shop - "How much should the bill come to? Have you been given the right change?" You could even ask them to work out who should pay what when you go out for dinner! Baking is an excellent opportunity for practicing mental calculation - ask your child to double/ halve/ x4 a recipe so that you can make a given quantity.
4. Ask your child to explain how they reached an answer when they have worked mentally - which numbers did they calculate first? How do they know they have reached the correct answer?
5. Encourage your child to check the reasonableness of the answer they have reached - does it make sense?
6. Encourage your child to practice doubling, halving, number bonds, multiplication and division facts regularly. Without these core facts your child will not develop fluency with their mathematics.
7. Support your child in using what they know when answering a question. For example if your child knows 6×4 they can use this to calculate 12×4 by doubling.
8. Encourage your child to break apart and re-combine numbers. For example if your child knows $2 \times 7 = 14$ and $6 \times 7 = 42$ they can work out 26×7 by thinking of 26 as 20 and 6 and multiplying the tens and ones separately. $140 + 42 = 182$

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For helping your child solve problems mentally

9. Encourage your child to use 'near doubles' to help them calculate mentally. For example when thinking about $36 + 35$ your child could double 35 and add 1 more.
10. Encourage your child to think about when it is appropriate to work out a calculation mentally, when they should use drawings or jottings to support their thinking or when they should use a written calculation.

For example, given the calculation $3764 - 3760$ it is much more efficient to mentally find the difference; a written method would take much longer and be more difficult.





For helping your child use written calculation methods

1. Talk to your child's teacher about which stage your child is up to with the written methods for addition, subtraction, multiplication and division. Showing them a different method at home to the one they are being taught at school can be very confusing!
2. Download our school's 'Progression in written calculation' document from the Maths section in 'Downloads' on the school website. This will show you how we teach the different stages leading up to formal written methods. (Nb a shiny, new version will be available soon)
3. If your child is working on a written calculation at home encourage them to lay it out carefully -most mistakes come where digits are not written in the correct columns. However, as mentioned in tips 1 and 2 do not panic if the layout looks different to the maths you remember from school -we are teaching your child to understand how and why calculations work; different layouts are used in the stepping stone stages towards formal written methods.
4. Encourage your child to estimate their answer before using a formal written method.
5. Encourage your child to check the reasonableness of their answer.
6. 'Talk' and where possible explicitly 'do' maths at home and in everyday life. Speak to your child about when, where, how and why you would complete a written calculation -even if it is using a calculator. It is important that your child sees the purpose of learning maths.
7. Try to talk positively about mathematics! If you had a negative experience of maths at school or feel that it is not your strength it can be easy to make maths sound hard or expect that your child will struggle in this area. Developing a positive learning attitude in a subject goes a long way towards success!
8. Ask your child to help you with real life mathematical problems where they can apply their written calculation skills in a meaningful way -they could cost out a family trip or work out what time you need to leave on a car journey.
9. If you would like more information about the different stages leading up to a formal written method video clips are available via:
<https://www.youtube.com/user/NCETM/videos>
10. Or if you prefer a book we recommend 'Maths for Mums and Dads' by Rob Eastaway and Mike Askew.

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