

Over the next few days and weeks your child will be learning about two-step problem-solving. Your child needs to know the language associated with two-step problem-solving – How many?, What's the difference?, tens, units, break, subtract, subtraction, take away, more, less, fewer, minus, number sentence/story, count back/forward, short way, another method/way, complete, estimate, Do I add or do I subtract?, Do I need to rename or regroup?, etc.

Note: Two-step problem-solving usually involves the use of brackets, for example, $(7 + 8) - 5 = 10$. The brackets tell us to do the operation that is inside them first. That means we add the 7 and 8 to get 15 and then we take away the 5.

Two-step problems on the hundred square

Ask your child to make a hundred square, as done in earlier exercises on addition and subtraction. Give him/her a counter, cube or coin. Call out any number that is on the hundred square. Start with simple numbers that are within ten, for example say: *Place your counter on the number 6. Now add 3 to that number/count on 3. Where will you land? (Yes! 9.) Now take away 4 from that number/count back 4 on the hundred square. Where will you land? (Yes! 5.)* Now ask your child to make a number story for that activity, for example: *I had six eggs. I got three more from the fridge. I used four eggs to make a cake. How many eggs had I left? (Yes! Five.)*

Extension: Ask your child to make a number sentence for the number story, i.e. $(6 + 3) - 4 = 5$. This should help your child to understand the value of brackets.

Bigger numbers

You can now build up to more difficult problems. For example, ask your child to place the counter on 30 on the hundred square. Say: *Move forward 20 and come back 10. Where are you now?*

Now ask your child to make a number story for that activity, for example, *I had 30 marbles. I won 20 more in a game. I then lost 10 in the field. How many marbles had I left? (Yes! 40.)* or *I had 30c. My friend gave me 20c. I gave 10c to my little sister. How much had I then? (Yes! 40.)*

Ask your child to make a number sentence for the number story, i.e. $(30 + 20) - 10 = 40$.

You should only advance to the more difficult problems when your child is comfortable doing two-step problems within 10/20/30, etc.

For example, say: *Place your counter on the number 26. Now add 13 to that number/count on 13. Where will you land? (Yes! 39.) Now take away 24 from that number/count back 24 on the hundred square. Where will you land? (Yes! 15.)*

Now ask your child to make a number story for that activity, for example, *I had 26c. I got 13c more from my dad. I bought a pencil for 24c in the shop. How much money had I left? (Yes! 15c.)* Ask your child to make a number sentence for the number story, i.e. $(26 + 13) - 24 = 15$.

The ladder

Give your child a counter and ask him/her to draw a ladder as in the picture below.



Call out a number, for example, 5. Your child should place his/her counter on rung 5 on the ladder. Now ask your child to go up 8 rungs and to then come down 5 rungs. Now ask your child: *Where are you on the ladder now?* Do this with a number of two-step problems within 25.

Here are samples:

- Place your counter on rung 6.
Go up 7 rungs and then come down 3 rungs.
- Place your counter on rung 2.
Go up 8 rungs and then come down 5 rungs.
- Place your counter on rung 9.
Go up 5 rungs and then come down 6 rungs.
- Place your counter on rung 7.
Go up 9 rungs and then come down 4 rungs.
- Place your counter on rung 8.
Go up 10 rungs and then come down 2 rungs.

The tin box

Get a tin box/cup/mug, or anything that is to hand. Give your child some counters/cubes/coins, etc. Give him/her a simple word problem, for example: *I placed eight coins in the box. I then took out five. Later, I put in nine. How many coins are in the box now?* Ask your child to make up the number sentence for the number story: $(8 - 5) + 9 = ?$

Ask him/her to place eight coins in the box. Now ask him/her to take out five. Ask: *How many coins are in the box now?* Proceed by asking your child to put nine coins in the box and ask: *How many coins are in the box now? How did you get the answer? (Yes! $3 + 9 = 12$.)* Practice this exercise with other simple word problems.