

Double and halves

Activity 1

Focus of activity: Double multiples of 5; Halving multiples of 10.

Working together: conceptual understanding

- Give each child a bead string with 100 beads.
- Ask chn to show 10 beads (and slide the other beads to the right of the string as they see it). Ask them to loosen the beads a little and fold this part of the string in half in order to show half of 10 is 5.
- Record: Half of 10 is 5.
- *We have two groups of 5 beads, so what is double 5?* Record Double 5 is 10 beside the first sentence.
- Next ask chn to show 20 beads, keeping them fairly loose. They fold this part of the string in half to show half of 20. What is half of 20? Record: Half of 20 is 10.
- *What double can you see?* Record: Double 10 is 20.
- Repeat for 30 beads, 60 beads and 70 beads. Record the half and double facts each time, asking chn to help you.
- Give each child a set of place value cards (10s and 1s). Ask chn to work in pairs. Each child makes 35 using their cards.
- *We are going to double 35, remember this is the same as working out 35 add 35.* Ask one child to collect the 10s cards and the other to collect the 1s cards. They each work out their totals.
- *How much do you have altogether? 60 and 10 makes 70, no 1s cards this time!* Record: Double 35 is 70.
- Repeat for double 45.

Up for a challenge?

We know that double 35 is 70. So what is half of 70? Check with the bead string. We know that double 45 is 90, so what is half of 90?

Now it's the children's turn:

- Chn work in pairs to shuffle a set of 10s cards (from their set of place value cards) and place face down.
- They take the top card, slide that number of beads to one side of a bead string, fold the string in half to find half of the number on the card. They record the halving fact.
- Repeat at least three more times.
- Chn take the next 10s card, and a 5 card to make a 2-digit number. They double this number. They record the doubling fact.
- Repeat at least three more times.
- Go round the group and mark their halves and doubles as they work them out, e.g. initially after three examples.

S-t-r-e-t-c-h:

If chn cope well, ask them to choose one of their halving facts and write the corresponding doubling fact. They choose a double and write the corresponding halving fact.

Things to remember.

Remember that when we halve a number, we can also say a double! What did you notice about the answers when we doubled numbers ending in 5? Ask a child to show an example. Did all the answers end in 0?

You may want to add something that has emerged from the activity. This may refer to misconceptions or mistakes made.

Resources	Outcomes
<ul style="list-style-type: none">• Bead strings (100 beads)• Place value cards (10s and 1s)	<ol style="list-style-type: none">1. Chn can halve multiples of 10 to 100.2. Chn can double multiples of 5 to 50.3. Chn begin to see the relationship between doubling and halving.

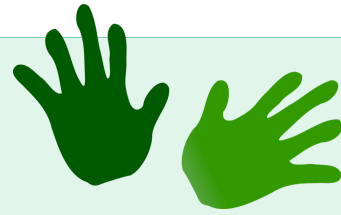
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Activity 1

Work in pairs

Things you will need:

- A set of place value cards (10s and the 5 card)
- Bead string (100 beads)



What to do:

- Shuffle a set of 10s cards (10 to 100). Place face down.
- Take the top card. Slide that number of beads to one side of a bead string.
- Fold the string in half to find half of the number on the card.
- Write the halving fact.
- Repeat at least three more times.
- Shuffle the 10, 20, 30, 40 and 50 cards. Place face down.
- Take the top card. Put with the 5 card to make a 2-digit number, e.g. 35.
- Double this number.
- Write the doubling fact.
- Repeat at least three more times.

	<u>Halves</u>
	1. Half of 50 is ...
	2. Half of ...
	<u>Doubles</u>
	1. Double 35 is ...
	2. Double ...

S-t-r-e-t-c-h:

Choose one of your halving facts and write the matching doubling fact.
Choose one of your doubling facts and write the matching halving fact.

Learning outcomes:

- I can halve multiples of 10 to 100.
- I can double multiples of 5 to 50.
- I am beginning to see the link between doubling and halving.