3, 4 and 8 multiplication and division facts

Prior learning

- Can recall and use multiplication and division facts for the 2-, 5- and 10-times tables, including recognising odd and even numbers.

Curriculum objectives

- To recall and use multiplication and division facts for the 3-, 4- and 8-times tables.

Success criteria

- I can use multiplication facts that I know to find related division facts.

Learn

- Review the children's recall of the 2-, 5- and 10-times tables. Ensure that they can read a multiplication square correctly and appreciate that multiplication can be carried out in any order. If appropriate, discuss the relationship between multiplication and division facts. For example, knowing $2 \times 5 = 10$ means that you also know $10 \div 5 = 2$.
- Spend time, preferably in short bursts, introducing and practising each of the 3-, 4- and 8-times tables. Referring to a multiplication grid, remind the children that 4×8 also gives them 8×4, and so on.
- *100 Maths Lessons Year 3 Autumn 1, Week 4* contains relevant and useful lessons and some useful activities and worksheets.

Talk maths

- Provide small groups with a multiplication grid for the 3-, 4- and 8-times tables and a selection of counters. Challenge them to pose quick-fire questions to each other, placing counters on the answers that they know on the grid. Use division too if desired.

Activities

- Use the textbook questions for a quick assessment of children's recall of multiplication facts. Move them on to activities and worksheets from the links to *100 Maths Lessons Year 3* and the *Year 3 Practice Book,* as appropriate. Notice that these include activities that involve doubling and halving – these will help the children's growing understanding of the 2-, 4- and 8-times tables.

Problems

- If the children answer the problems confidently, challenge them to create their own, reminding them that they must be able to explain the method and operation for finding their solutions.

100 Maths Lessons Year 3 links:

- Autumn 1, Week 4 (pages 26–31): recall and use multiplication facts for the 2-, 4- and 8-times tables
- Autumn 2, Week 3 (pages 61–66): learn the 3-times table; use the 2-, 4- and 8-times tables
- Spring 1, Week 3 (pages 102–106): use times table facts to carry out multiplications and divisions
- Spring 1, Week 4 (pages 107–112): use known multiplication facts to derive division facts

Year 3 Practice Book links:

- (pages 42–43): Multiples of 2, 5 and 10
- (pages 44–45): Multiples of 3 and 4
- (page 46): The 8-times table
- (page 47): More 8-times table
- (page 50): Multiplication and division families
- (page 51): Relationship between × and ÷
- (page 64): Double and halve
- (page 65): More doubles and halves

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Learn

You already know the multiplication facts for 2, 5 and 10.
Look at the table below and check you remember them.

You need to learn the multiplication facts for 3, 4 and 8.

×	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
8	8	16	24	32	40	48	56	64	72	80	88	96
10	10	20	30	40	50	60	70	80	90	100	110	120

Remember, if you know $3 \times 4 = 12$, you also know $4 \times 3 = 12$.

You can use multiplication facts to find division facts.

If you know $4 \times 3 = 12$ and $3 \times 4 = 12$, you also know $12 \div 3 = 4$ and $12 \div 4 = 3$.

✓ Tip

You can multiply numbers in any order.

If you know a multiplication fact, you can work out a division fact.

If you forget a multiplication fact, you can sometimes use doubling to help you. For example, to find 7×8, work out 7×4 and double the answer.

Talk maths

Ask a friend to test you on your multiplication facts.

Use a multiplication table and circle the multiplication facts you know.

Can you think of ways to remember the ones you are not sure of?

Activities

Cover up the table with a piece of paper.
Write down the answers to these calculations using your memory.

1. 9×8
2. $44 \div 4$
3. $96 \div 8$
4. 9×3
5. $36 \div 3$
6. 4×12

Problems

Brain-teaser
Maia has 24 sweets to be shared between herself and three friends. How many sweets do they each get?

Brain-buster
There are 48 pencils to be shared out equally into pots. Each pot contains six pencils. How many pots are there?