Charvil Piggott Primary School
A Church of England Academy

Rainbow Maths Facts to Know and Ways to Practise at Home

The aim of these facts is to help children become confident and fluent with number skills over time. Short, regular practice at home (5–10 minutes) makes a huge difference. Everyday maths through games, cooking, shopping, and conversations is often the best way to learn.

Work through the colours of the rainbow to make sure ALL the basic facts are secure.

Red

Red Facts: Subitising to 5 *(Recognising a small number without counting)*

Children should be able to "see" how many objects there are up to 5 without counting one by one.

Try this at home:

- Use dice and dominoes.
- Show different arrangements of the same number (not just dice patterns).
- Use fingers, buttons, raisins, or toy bricks.

Red Facts: Comparing amounts without counting Children learn to compare groups using words such as:

- more than, fewer than, equal to

Try this at home:

- Match socks or toys into pairs.
- Compare two plates of snacks.
- Ask questions like:
    - "Which has more?"
    - "Which has fewer?"
    - "Are they equal?"

Red Facts: Understanding that numbers are made of parts

For example:

- 3 can be made from 2 and 1, 4 can be made from 2 and 2, 5 can be made from 3 and 2

Try this at home:

- Use toy bricks or pasta pieces to split numbers into groups.
- Play "hidden number" games:

  "I have 5 grapes. Here are 2. How many are hiding?"
- Use fingers to show different ways to make numbers.

Red Facts: Counting objects to 10

Try this at home:

- Count toys while tidying up.
- Count steps, snacks, or cars.
- Encourage touching or moving objects while counting.

Red Facts: Counting beyond 20 aloud

Try this at home:

- Count while climbing stairs or driving.
- Count forwards and backwards together.
- Sing counting songs.

Red Facts: Recognising numerals to 10 Children should match the written number to the correct quantity.

Try this at home:

- Make number cards.
- Match numbers to groups of objects.
- Use magnetic numbers or chalk outdoors.

Red Facts: Understanding one more and one less

Try this at home:

- Use toys or snacks:
    - “If we add one more, how many now?”
    - “If we take one away?”
- Count forwards and backwards on number tracks.

Red Facts: Seeing 6–9 as “5 and a bit” For example: 7 is 5 and 2 more

Try this at home:

- Use fingers: show 5 first, then extra fingers.
- Use egg boxes or ten frames.
    - Ask: “How many more than 5?”

Red Facts: Recognising odd and even numbers

Children begin to see:

- even numbers can be paired equally
- odd numbers have one left over

Try this at home:

- Pair socks or toys.
- Share snacks between two people.
    - Ask: “Does everyone get a partner?”

Red Facts: Learning doubles to double 5

Examples:

- double 2 = 4
- double 5 = 10

Try this at home:

- Fingers.
- Chant doubles together.
- Play “double it” games with snacks or toys.

Red Facts: Ordering numbers and playing track games

Try this at home:

- Play board games with numbered spaces.
- Put number cards in order.
- Use chalk number lines outdoors.

Red Facts: Knowing one more and one less to 10

Try this at home:

- Quick-fire questions during the day:
    - “What is one more than 6?”
    - “One less than 9?”

Red Facts: Number bonds to 5

Examples: 2 + 3 = 5, 4 + 1 = 5

Try this at home:

- Use fingers or objects.
- Play “make 5” games.

Red Facts: Beginning number bonds to 10

Try this at home:

    - Ask: “What goes with 6 to make 10?”
- Play matching card games.

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Orange

Orange Facts: Understanding odd and even numbers

Try this at home:

- Pair objects into twos.
- Spot odd and even house numbers.

Orange Facts: Numbers 11–19 as "10 and a bit" For example: 14 is 10 and 4 more

Try this at home:

- Use coins or Lego bricks.

Orange Facts: Placing numbers on a number line

Try this at home:

- Draw number lines with chalk.
- Ask: "Is 14 closer to 10 or 15?"

Orange Facts: Splitting numbers into tens and ones

Try this at home:

- Use straws bundled into tens.

- Build numbers with blocks.

Orange Facts: Doubling and halving to 20

Try this at home:

- Share food equally.
- Double recipes or toy amounts.

Orange Facts: Adding and subtracting 2 to any number to 50

Try this at home:

  - Play quick-fire maths games: ask “7 + 2” “9 – 2”

Number bonds to make 6, 7 and 8

Try this at home:

- Play “make the number” games.
- Use counters or cards.

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Yellow

Yellow Facts: Doubles to double 10

Try this at home:

- Practise doubles in the car or at dinner.

Yellow Facts: Number bonds to 20

Try this at home:

- Ask: “What goes with 13 to make 20?”

Yellow Facts: Subtraction facts within 20

Try this at home:

- Use toys or snacks to “take away.”

Yellow Facts: Near doubles

For example: 8 + 9 is close to 8 + 8

Try this at home:

- Spot “almost doubles” during mental maths games.

Yellow Facts: Adding 3 numbers

Try this at home:

- Encourage children to spot bonds to 10 first.

Example:

- 7 + 5 + 3 - Spot 7 + 3 = 10, then add 5.

Yellow Facts: Partitioning numbers to make 10

Example:

- 8 + 5 becomes 8 + 2 + 3

Try this at home:

- Use beans as counters to split numbers apart.

Yellow Facts: Counting in tens to 100

Try this at home:

- Count money in 10p coins.
- Chant tens while walking or clapping.

Yellow Facts: Recall all number bonds to 20

Try this at home:

- Play matching games.
- Use quick-fire questions.

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Green

Green Facts: Number facts to 10 and 20

Try this at home:

- Practise mentally during journeys or meal times.

Green Facts: 2 times table and division facts

Try this at home:

- Count in 2s.
- Spot pairs in everyday life.

Green Facts: 5 times table and division facts

Try this at home:

- Count in 5s using hands, clocks and money.

Green Facts: 3 times table and division facts

Try this at home:

- Clap or jump in groups of 3.
- Use songs and rhymes.(Online videos)

Green Facts: Recall multiplication and division facts for 2, 3, 5 and 10 times tables

Try this at home:

- Use apps, songs, flashcards, or quick quizzes.
- Practise little and often.

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Blue

Blue Facts: Learn the 4, 6, 7 and 8 times tables

Try this at home:

- Chant tables regularly.
- Use multiplication games online.
- Practise division facts alongside multiplication.

Blue Facts: Learn the 9 and 11 times tables

Try this at home:

- Use finger tricks for 9s.
- Spot patterns in 11s.

Blue Facts: Learn the 12 times table

Try this at home:

- Practise counting in 12s.
- Use calendars and clocks for real-life links.

Blue Facts: Instant recall of all multiplication facts

Try this at home:

- Short daily practice is most effective.
- Mix up questions rather than learning in order.

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Purple

Purple Facts: Recall square numbers and square roots

Try this at home:

- Cycling Squares – At http://nrich.maths.org/1151
- Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some strange picture stories to help children remember

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Purple Facts: Instant recall of all times table facts to 12 × 12

Try this at home:

- Keep practising little and often – facts can be forgotten!
- Use games, quizzes, apps, and real-life maths opportunities.
- Encourage quick recall rather than counting.

Purple Facts: Instant recall metric conversions.

1 kilogram = 1000 grams

1 kilometre = 1000 metres

1 metre = 100 centimetres

1 metre = 1000 millimetres

1 centimetre = 10 millimetres

1 litre = 1000 millilitres

Try this at home :

- Look at the prefixes – Can your child work out the meanings of kilo-, centi- and milli-?
- Do some baking and convert the measurements in the recipe.
- Calculate some distances using unusual measurements. How tall is your child in mm? How far away is London in metres?

Purple Facts: Converting between decimals, fractions and percentages

Children learn that fractions, decimals and percentages can represent the same amount.

Examples:

- ½ = 0.5 = 50%
- ¼ = 0.25 = 25%
- ¾ = 0.75 = 75%

They should begin to recognise common equivalents and convert between them confidently.

Try this at home:

  - Compare shop discounts: "50% off means half price."
  - Use money: 50p is £0.50, 25p is 25% of £1
- Make matching cards with fractions, decimals, and percentages to pair together.
- Use hundred squares to shade percentages and link them to decimals and fractions.
- Ask quick questions such as:
  - "What is 0.5 as a fraction?"
  - "What is 25% as a decimal?"
- Practise with measuring and cooking:
  - "Half a litre is 0.5 litres."