



# Year 4

Supporting your child at  
home with maths



## Mathematics in Year 4

By the end of Year 4, children will be expected to know all of their times tables up to  $12 \times 12$  by heart. This means not only recalling them in order but also being able to answer any times table question at random, and also knowing the related division facts. For example, in knowing that  $6 \times 8 = 48$ , children can also know the related facts that  $8 \times 6 = 48$  and that  $48 \div 6 = 8$  and  $48 \div 8 = 6$ . This expertise will be particularly useful when solving larger problems and working with fractions.

### Number and Place Value

- Count in multiples of 6, 7, 9, 25 and 1,000
- Count backwards, including using negative numbers
- Recognise the place value in numbers of four digits (1000s, 100s, 10s and 1s)
- Put larger numbers in order, including those greater than 1,000
- Round any number to the nearest 10, 100 or 1,000
- Read Roman numbers up to 100

Roman Numerals' Basics:

I = 1 ; V = 5 ; X = 10 ; L = 50 ; C = 100

Letters can be combined to make larger numbers. If a smaller value appears in front of a larger one then it is subtracted, e.g. IV (5 - 1) means 4. If the larger value appears first then they are added, e.g. VI (5 + 1) means 6.

### Calculations

- Use the standard method of column addition and subtraction for values up to four digits
- Solve two-step problems involving addition and subtraction
- Know the multiplication and division facts up to  $12 \times 12 = 144$
- Use knowledge of place value, and multiplication and division facts to solve larger calculations
- Use factor pairs to solve mental calculations, e.g. knowing that  $9 \times 7$  is the same as  $3 \times 3 \times 7$
- Use the standard short multiplication method to multiply three-digit numbers by two-digit numbers

### Fractions

- Use hundredths, including counting in hundredths
- Add and subtract fractions with the same denominator, e.g.  $\frac{4}{7} + \frac{5}{7}$
- Find the decimal value of any number of tenths or hundredths, for example  $\frac{7}{100}$  is 0.07
- Recognise the decimal equivalents of  $\frac{1}{4}$ ,  $\frac{1}{2}$  and  $\frac{3}{4}$
- Divide one- or two-digit numbers by 10 or 100 to give decimal answers
- Round decimals to the nearest whole number
- Compare the size of numbers with up to two decimal places

### Measurements

- Convert between different measures, such as kilometres to metres or hours to minutes
- Calculate the perimeter of shapes made of squares and rectangles
- Find the area of rectangular shapes by counting squares
- Read, write and convert times between analogue and digital clocks, including 24-hour clocks
- Solve problems that involve converting amounts of time, including minutes, hours, days, weeks and months

## Shape and Position

- Classify groups of shapes according to the properties, such as sides and angles
- Identify acute and obtuse angles
- Complete a simple symmetrical figure by drawing the reflected shape
- Use coordinates to describe the position of something on a standard grid
- Begin to describe movements on a grid by using left/right and up/down measures

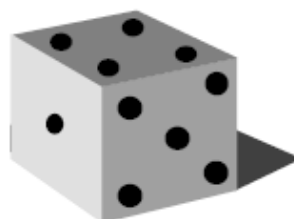
## Graphs and Data

- Construct and understand simple graphs using discrete and continuous data

Discrete data is data which is made up of separate values, such as eye colour or shoe size. Continuous data is that which appears on a range, such as height or temperature.

## Fun activities to do at home

### Dicey tens



For this game you need a 1–100 square (a snakes and ladders board will do), 20 counters or coins, and a dice.

- ◆ Take turns.
- ◆ Choose a two-digit number on the board e.g. 24.
- ◆ Roll the dice. If you roll a 6, miss that turn.
- ◆ Multiply the dice number by 10, e.g. if you roll a 4, it becomes 40.
- ◆ Either add or subtract this number to or from your two-digit number on the board, e.g.  $24 + 40 = 64$ .
- ◆ If you are right, put a coin on the answer.
- ◆ The first to get 10 coins on the board wins.

### Sum it up

- ◆ Each player needs a dice.
- ◆ Say: *Go!* Then each rolls a dice at the same time.
- ◆ Add up all the numbers showing on your own dice, at the sides as well as at the top.
- ◆ Whoever has the highest total scores 1 point.
- ◆ The first to get 10 points wins.

## Left overs

- ◆ Take turns to choose a two-digit number less than 50.
- ◆ Write it down. Now count up to it in fours. What number is left over?
- ◆ The number left is the number of points you score, e.g.

Choose 27.

Count: 4, 8, 12, 16, 20, 24.

3 left over to get to 27.

So you score 3 points.

- ◆ The first person to get 12 or more points wins.

Now try the same game counting in threes, or in fives.  
Can you spot which numbers will score you points?

## Out and about

- ◆ Choose a three-digit car number, e.g. 569.
- ◆ Make a subtraction from this, e.g.  $56 - 9$ .
- ◆ Work it out in your head. Say the answer.
- ◆ If you are right, score a point.
- ◆ The first to get 10 points wins.



## Number game 1

You need about 20 counters or coins.

- ◆ Take turns. Roll two dice to make a two-digit number, e.g. if you roll a 4 and 1, this could be 41 or 14.
- ◆ Add these two numbers in your head. If you are right, you win a counter. Tell your partner how you worked out the sum.
- ◆ The first to get 10 counters wins.

Now try subtracting the smaller number from the larger one.

## Number game 2



Put some dominoes face down

- ◆ Shuffle them.
- ◆ Each choose a domino.
- ◆ Multiply the two numbers on your domino.
- ◆ Whoever has the biggest answer keeps the two dominoes.
- ◆ The winner is the person with the most dominoes when they have all been used.

## Number game 3

Use three dice.

If you have only one dice, roll it 3 times.

- ◆ Make three-digit numbers, e.g. if you roll 2, 4 and 6, you could make 246, 264, 426, 462, 624 and 642.
- ◆ Ask your child to round the three-digit number to the nearest multiple of 10. Check whether it is correct, e.g.  
76 to the nearest multiple of 10 is 80.  
134 to the nearest multiple of 10 is 130.  
(A number ending in a 5 always rounds up.)
- ◆ Roll again. This time round three-digit numbers to the nearest 100.

## Dicey division

You each need a piece of paper. Each of you should choose five numbers from the list below and write them on your paper.

**5    6    8    9    12    15    20    30    40    50**

- ◆ Take turns to roll a dice. If the number you roll divides exactly into one of your numbers, then cross it out, e.g. you roll a 4, it goes into 8, cross out 8.
- ◆ If you roll a 1, miss that go. If you roll a 6 have an extra go.
- ◆ The first to cross out all five of their numbers wins.

## Pairs to 100

This is a game for two players.

- ◆ Each draw 10 circles. Write a different two-digit number in each circle – but not a 'tens' number (10, 20, 30, 40...).
- ◆ In turn, choose one of the other player's numbers.
- ◆ The other player must then say what to add to that number to make 100, e.g. choose 64, add 36.
- ◆ If the other player is right, she crosses out the chosen number.
- ◆ The first to cross out 6 numbers wins.

## Looking around

Choose a room at home.

Challenge your child to spot 20 right angles in it.

