

Maths Targets for pupils in Year 6



A booklet for parents

Help your child with mathematics

**For additional information on the agreed calculation methods,
please see the school website.**

About the targets

These targets illustrate what **most** children will have been taught by the **end** of Year 6. However, some children may need consolidation of earlier objectives, therefore greater focus will be given to these. Some children will have exceeded these targets, and will be working to more challenging objectives.

THE TARGETS

Using and Applying

- To be able to identify and obtain necessary information to solve mathematical problems.
- To check and spot errors whilst reviewing the methods used.
- To show understanding of problems by describing them mathematically using symbols, words and diagrams.
- To draw simple conclusions of their own and give an explanation of their reasoning.
- To explain and justify their methods and solutions.
- To break a several-step problems or investigations into simpler steps.
- To solve simple problems involving ordering, adding and subtracting negative numbers in context
- To solve simple problems involving ratio and proportion

Number

- To use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 and 1000 and explain the effect
- To round decimals to the nearest decimal place
- To order negative numbers in context
- To recognise and use number patterns and relationships.
- To add and subtract mixed numbers and fractions
- To multiply and reduce fractions and write the answers in its simplest form
- To divide fractions by whole numbers
- To understand simple ratio, use ratio to show relative sizes of quantities and reduce a ratio to its lowest terms.
- To check solutions by applying inverse operations or estimating using approximations
- To use all four operations with decimals to two places
- To use a calculator where appropriate to calculate fractions and percentages of quantities/measurements, etc.
- To be able to understand and use an appropriate non-calculator method for solving problems that involve multiplying and dividing any four digit number by any two-digit number

- To calculate simple fractions or percentages of a number/quantity, e.g. $\frac{3}{8}$ of 400g or 60% of £300
- To use and interpret coordinates in all four quadrants
- To understand simple expressions using symbols e.g. '2 less than n' can be written as ' $n - 2$ '
- To use symbols to represent an unknown number in a number sentence

Shape, Space and Measure

- Compare and classify shapes
- Find unknown angles in regular polygons
- Illustrate and name parts of a circle:
- Recognise, describe and make nets of 3D shapes
- Calculate the volume of simple 3D shapes
- Estimate the size of angles
- Describe position in all four quadrants
- Construct translate and reflect shapes
- Use, read, write and convert standard units
- Calculate the area of parallelograms and triangles

Statistics

- Read, draw and interpret line graphs
- Use, interpret and apply all three averages
- Use the language associated with probability

Parents play a vital role in children's mathematical development. Many key mathematical skills can be supported at home through everyday activities such as:

- Telling the time
- Weighing for cooking
- Measuring for craft and DIY
- Using money and playing board games.

Many of these skills are the "real-life" maths that we use every day, and are more effectively learned in the setting in which we use them.

Fun activities to do at home

Fours

- Use exactly four 4s each time.
- You can add, subtract, multiply or divide them.
- Can you make each number from 1 to 100?
- Here are some ways of making the first two numbers.

£1,000,000

One million pounds

Assume you have £1 000 000 to spend or give

$$1 = (4 + 4)/(4 + 4)$$

$$2 = 4/4 + 4/4$$

away.
Plan with your child what to do with it, down to the last penny.

Animals

- Take turns to think of an animal.



- Use an alphabet code, A = 1, B = 2, C = 3... up to Z = 26.
- Find the numbers for the first and last letters of your animal,
- e.g. for a TIGER, T = 20, and I = 9,
- Multiply the two numbers together, e.g. $20 \times 9 = 180$.
- The person with the biggest answer scores a point.
- The winner is the first to get 5 points.

When you play again you could think of names, food, countries etc



Card game

Use a pack of playing cards.

Take out the jacks, queens and kings.

- Take turns.
- Take a card and roll a dice.
- Multiply the two numbers.
- Write down the answer. Keep a running total.
- The first to go over 301 wins!
- Add the 2 numbers together
- Subtract the smallest number from the biggest

Remainders

Draw a 6x6 grid like this and fill in numbers under 100.

82	33	60	11	73	22
65	12	74	28	93	51
37	94	57	13	66	38
19	67	76	41	75	85
86	29	68	58	20	46
50	69	30	78	59	10

- Choose the 7, 8 or 9 times table.
- Take turns.
- Roll a dice.
- Choose a number on the board, e.g. 59. Divide it by the
 - tables number, e.g. 7. If the remainder for $59 \div 7$ is the same
 - as the dice number, you can cover the board number with a
 - counter or coin.
- The first to get three of their counters in a straight line wins!

Recipes

Find a recipe for 4 people and rewrite it for 8 people, e.g.

4 people

8 people

125g flour

250g flour

50g butter

100g butter

75g sugar

150g sugar

30ml treacle

60ml treacle

1 teaspoon ginger

2 teaspoons ginger

Can you rewrite it for 3 people? or 5 people?

Favourite food



- Ask your child the cost of a favourite item of food.
 - Ask them to work out what 7 of them would cost, or 8, or 9.
 - How much change would there be from £50?
- Repeat with his/her least favourite food.
 - What is the difference in cost between the two?

Food Offers

Ask which would be cheaper, 2 pizzas for £20 or 50% off the total order?

Is it cheaper to buy 1 large or 2 small?

Sale of the century

- When you go shopping, or see a shop with a sale on, ask your child to work out what some items would cost with:

50% off

25% off

10% off

5% off

Ask your child to explain how s/he worked it out.

Journeys

Use the chart in the front of a road atlas that tells you the distance between places.

- Find the nearest place to you.
- Ask your child to work out how long it would take to travel from this place to some other places in England if you travelled at an average of 60 miles per hour, i.e. 1 mile per minute, e.g.

York to Preston: 90 miles 1 hour 30 minutes

York to Dover: 280 miles 4 hours 40 minutes

Encourage your child to count in 60s to work out the answers mentally. Extend this by asking questions like "What if you travelled at 30 mph? What if we started at London?"



Doubles and trebles

- Roll two dice.
- Multiply the two numbers to get your score.
- Roll one of the dice again. If it is an even number, double your score.
 - If it is an odd number, treble your score.
- Keep a running total of your score.

The first to get over 301 wins.

Using timetables

What time does the next train arrive?

How long does the journey take?

What time does the last train of the day leave?

We have a community license for interactive resources: www.interactive-resources.co.uk with some excellent games to support maths for children of all levels.

Username: saltford

Password: pupils