

Properties of shapes

HERE'S THE MATHS

This week the focus is on the properties of 2-D shapes. Your child is studying rectangles and finding missing lengths and angles. They learn about regular and irregular polygons (2-D shapes with 3 or more sides).

ACTIVITY

1 48 cm	2 72 cm	3 100 cm
4 120 cm	5 96 cm	6 144 cm

What to do

- The grid shows different perimeters of regular polygons.
- Roll the dice to decide which perimeter to investigate.
- Both sketch and name as many different regular polygons for that perimeter as possible.
- Compare sketches.
- Roll the dice to try another perimeter.
- Play for 10 minutes.

Variation

- Use these perimeters to deduce possible side lengths for rectangles.

QUESTIONS TO ASK

What is a diagonal?

Which quadrilateral can never have a pair of parallel sides? (*kite*)

What is the definition of a regular polygon? (*2-D shape with all the sides equal and all the angles equal.*)

What are the conventional signs for a right angle and lines of the same length? (*Γ and small lines*)

Describe the properties of different quadrilaterals.



Year 5 Maths Newsletter 9



Date: _____

Name: _____

MATHS TOPICS

These are the maths topics your child will be working on during the next three weeks:

- Number and place value
- Addition and subtraction
- Properties of shapes

KEY MATHEMATICAL IDEAS

During these three weeks your child will be learning to:

- recognise years written in Roman numerals
- add and subtract mentally whole numbers and decimals
- recognise that regular polygons have equal sides and equal angles.

TIPS FOR GOOD HOMEWORK HABITS

Homework gives you the opportunity to become involved in your child's learning. Try to show them how their learning is useful in everyday life.

Number and place value

HERE'S THE MATHS

Your child is learning to recognise numbers written in Roman numerals. The system is based on seven symbols: I = 1, V = 5, X = 10, L = 50, C = 100, D = 500, M = 1000. Numbers are written beginning with the largest number, which is repeated if necessary, e.g. 2000 = MM. When a smaller number is written in front of a bigger number, it means that the smaller number is subtracted, e.g. XL = 40 (while LX = 60). The Roman system had no symbol for zero.

ACTIVITY

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What to do

- Select 3 different cards and make all the possible 3-digit numbers.
- Work out each number in Roman numerals.
- Check each other's answers.
- Select 3 different cards and repeat.
- Rub out the grid to use again.

You will need:

- 0–9 cards
- pencil, paper and rubber

Variation

- Try doing this with years. Set the thousands digit as 1 or 2.

QUESTIONS TO ASK

What number does the letter D (X, L, M) represent in Roman numerals?

Explain how the Roman system differs from our number system.

What is this year in Roman numerals?

Round 555 555 to the nearest 10 (100, 1000, 10 000 and 100 000).

Addition and subtraction

HERE'S THE MATHS

Your child is practising addition and subtraction of whole numbers (up to 6 digits) and decimals (with up to two decimal places) this week, choosing an appropriate method, including formal written methods. They estimate and use rounding to check answers to calculations.

ACTIVITY

A	547 805	657 087	476 007	742 973	470 216
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B	323 652	237 954	164 017	187 421	280 763
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What to do

- Choose a number from A and a number from B.
- Estimate the total if you add A + B. Add them using the formal written method.
- Estimate the difference if you calculate A – B. Carry out the subtraction using the formal written method.
- Check with the calculator.
- Repeat with new numbers.
- Discuss your confidence in carrying out addition and subtraction calculations.

You will need:

- pencil and paper
- calculator (or use mobile phone)

Variation

- Try using decimal numbers with two decimal places.

QUESTIONS TO ASK

What is 28 374 rounded to the nearest 10 (100, 1000, 10 000)?

What is the difference between 47 427 and 28 427?

What must be added to 0.37 to make 1?

What is sum of 52 879 and 47 121? (Did you guess the answer before finishing?)

What is the sum of 3.84 and 6.16? (Did you guess the answer before finishing?)