

Maths – 4th to 8th January 2021

Year 6

(Mrs Martin's, Mrs Lewis's and Mrs Quantick's Year 6 pupils)

While we are working remotely, we will be using the Oak National Academy lessons to help support your learning. Please ensure that you are following the lessons carefully and pause to complete all the mini independent tasks as you are asked to do so. All lessons can be found on Oaks National Academy <https://www.thenational.academy/>

For each lesson:

- Start with the Introductory Quiz
- Follow the video lesson – paying close attention to the information and demonstrations from the teacher
- Complete the independent activities when asked to do so (pausing the video to give yourself as much time as you need)
- Finish with the Exit Quiz.
- For every lesson you will need a piece of paper or an exercise book, a sharp pencil and a ruler.

This week we will start to work through the series of lessons on Coordinates and Shapes. If you'd like to work on a coordinates grid, there's one in the attachments below to print out (it's called "4 quadrant grid").

Monday 4th January

Describing Coordinate Positions on a Grid

<https://classroom.thenational.academy/lessons/describing-coordinate-positions-on-a-grid-6hgpat>

Watch the lesson video, pausing where Miss Parsons tells you to pause to complete an activity. Mark your work when she shows you the correct answers.

The first "Do Now" activity is about the vocabulary for this topic: coordinate, point, plot, axis/axes, quadrant, position. The second one asks you to find Marianne's errors. In the final activity about shapes you will need to remember some of the important properties of particular shapes - a rectangle, square and isosceles triangle. We're sure you can describe the properties of squares and rectangles but just in case you've forgotten what an isosceles triangle is - here's some hints: it has two equal angles, two sides of equal length and one line of symmetry. This is a good website for more about different types of triangle:

<https://www.mathsisfun.com/triangle.html>

Tuesday 5th January

Translating Simple Shapes

<https://classroom.thenational.academy/lessons/translating-simple-shapes-6hjpat>

For the quiz you will need to remember how to measure co-ordinates. Remember - along the corridor and up the stairs. You will need to measure the position across the x-axis first, followed by the position either up or down the y-axis afterwards.

The video then talks you through how to describe translations by using the language up/down and left/right. You will need the quadrant that you used yesterday. At 16 minutes 47 seconds, the video will ask you to pause. You will need to complete the Independent Task, which you don't need to print. Just 'Close Video' and click 'Next Activity'. Complete the independent tasks by clicking the right arrow or choosing the next slide from the drop-down list. There are 5 questions to complete. You should note down your answers on a piece of paper and use the quadrant print out if it helps you. When you have completed all of the questions, click 'Resume Video' and each question will then be explained. Work your way through the questions and correct any errors. When you have marked the tasks, close the video and click 'Next Activity' to complete the Exit Quiz. It might be helpful to use the quadrant grid on the final question.

Wednesday 6th January

Reflecting Simple Shapes

<https://classroom.thenational.academy/lessons/reflecting-simple-shapes-6mu3ec>

In this lesson, Miss Parsons teaches you about the mirror line and using what you know about the four quadrants to correctly identify new coordinates of reflected shapes. You will become more familiar with terms such as the "top left quadrant" and the "bottom right quadrant" etc and will know which of the coordinates is negative due to the quadrant it is in. Miss Parsons uses the terms 'original' and 'post-reflection': 'original' means the first shape when we only had one version of it; 'post' means 'after' so here she is talking the new shape, in a different position having been reflected. Look at Miss Parson's annotations and listen to her thinking as she solves problems.

In the final quiz, question 5 uses unlabelled axes. This is like the most challenging questions on coordinates on SATs papers and is worth persevering with. Remember you can draw the problem on squared paper or on a four-quadrant grid you can print from the attachments and use annotations like Miss Parsons.

Thursday 8th January

Solving Practical Coordinate Problems (part 1)

<https://classroom.thenational.academy/lessons/solving-practical-coordinate-problems-part-1-c9h3ec>

In this lesson, Miss Parsons looks for patterns to help her solve problems. She uses her knowledge to find missing coordinates: for example, she knows that points on the same horizontal line have the same y coordinate and points on the same vertical line have the same x coordinate.

In the Independent Task, you are asked to find the missing coordinates from a square; Miss Parsons uses the 'diagonals' of the shape to help her solve this. If you'd like to know more about diagonals here are two websites you could visit: <https://www.theschoolrun.com/what-is-diagonal> <https://www.splashlearn.com/math-vocabulary/geometry/diagonal> She also talks about an 'isosceles trapezium'; this is a trapezium which has two identical base angles and one line of symmetry. You will also learn that you can have a decimal coordinate e.g. (1.5 , 4).

Friday 9th January

Solving Practical Coordinate Problems (part 2)

<https://classroom.thenational.academy/lessons/solving-practical-coordinate-problems-part-2-6hh34e>

Today you will be completing the final lesson in this series on coordinates, translation and reflection. It follows the same style as Thursday's session; there is a quiz at the beginning, an independent task of 5 questions and an exit quiz.