Power Maths Answers				
MONDAY 20.4.20	**TUESDAY** 21.4.20	**WEDNESDAY** 22.4.20	**THURSDAY** 23.4.20	**FRIDAY** 24.4.20
Sorting 3D shapes pages 105–107	Making patterns with 3D shapes pages 108–110	End of unit check pages 111–112	Introducing whole and parts pages 113–115	Making equal parts pages 116–118
1. Children should have circled the following shapes: Has a curved surface: square-based pyramid Has more than one square face: tetrahedron (triangle based pyramid) Has fewer than five vertices: both shapes **2.** square-based pyramid. **3.** Sphere **4.** Children could have sorted the shapes in different ways, e.g. Has a curved surface (sphere); Does not have a curved surface (all other shapes) Has an odd number of vertices (square-based pyramid); Does not have an odd number of vertices (all other shape). **5.** Fewest to most edges: D, A, E, B and C Fewest to most vertices: D, A, E, B, C	**1.** Missing shapes from left to right: a) cylinder b) cone c) sphere, cube **2.** Answers will vary depending on the pattern children have made. a) The cone should be numbered 4. The numbers below identical shapes should total 8. b) The cuboid should be numbered 4. The numbers below the cubes should total 8. **3.** a) and b) Answers will vary depending on the pattern children have made. **4.** Answers will vary. 5. a) and b) The following answers are possible: cube, tetrahedron (triangle-based pyramid), cube – 30 edges in pattern cuboid, tetrahedron (triangle-based pyramid), cuboid – 30 edges in pattern square-based pyramid, cube, square-based pyramid – 28 edges in pattern square-based pyramid, cuboid, square-based pyramid – 28 edges in pattern	**My journal** If children cut off one of the square's corners, they produce a pentagon and a triangle. Children could then cut off a corner from the triangle to create a smaller triangle, a quadrilateral and a pentagon. Alternatively, children could cut the square from side to side to produce two quadrilaterals. By cutting a corner off from either quadrilateral, children will end up with a pentagon, a quadrilateral and a triangle. **Power puzzle** With 24 cubes, children could create a 1 × 1 × 24 cuboid, a 1 × 2 × 12 cuboid, a 1 × 3 × 8 cuboid, a 1 × 4 × 6 cuboid, a 2 × 2 × 6 cuboid or a 2 × 3 × 4 cuboid. In order to find all the possibilities, children need to understand that cuboids need to have six faces and that the faces can be square or oblong. With 27 cubes, children can create a 1 × 1 × 27 cuboid, a 1 × 3 × 9 cuboid or a 3 × 3 × 3 cuboid. To find all 3, children need to understand that a cube is a special type of cuboid.	1. cat ➜ whiskers, house ➜ chimney, bus ➜ wheel, tree ➜ leaf 2. The truck is the whole (in both instances). Children could have completed the other statements with: wheel, light, bumper or window. 3. Children could have completed the sentences using different parts, e.g. a) The cake is the whole and the sugar is a part. b) The flour is a part and the cake is the whole. 4. Children could have completed the sentences in different ways, e.g. a) The flower is the whole. The petal is a part. b) The swings are the whole. The seat is a part. 5. Children could have suggested different answers, e.g. The house is the whole. The school is the whole. The wall is the whole.	1. a) 2 b) 3 c) 4 2. a) equal b) unequal c) equal (although some children might say that the parts are unequal because they are different shapes) 3. Children should have drawn lines to descriptions as follows (from top to bottom): Equal parts Unequal parts Equal parts Equal parts Equal parts Unequal parts 4. Children should have drawn 3 biscuits on each plate. 5. Children could have folded one sheet into equal parts in many different ways, e.g. using a horizontal fold, vertical fold or diagonal fold. The fold should pass through the centre of the paper.

Reflect Children could have sorted the shapes in different ways, e.g. Has at least 1 triangular face (tetrahedron and triangular prism); Has no triangular faces (cube and cylinder) Every face is the same shape (cube and tetrahedron); Not every face is the same shape (cylinder and triangular prism)	**Reflect** Children could have explained the difference between a symmetrical and a repeating pattern in different ways, eg. In a symmetrical pattern, the shapes have to be the same on each side around the middle of the pattern. In a repeating pattern, a group of shapes is repeated again and again.		**Reflect** Children could have chosen many different items, e.g. The cupboard is the whole. The drawer is a part. The computer is the whole. The screen is a part.	**Reflect** Children should have recognised that the loaf has not been cut into 2 equal parts. They could have explained how they know in different ways, e.g. The part on the left is longer than the part on the right.