Contents

Introduction	5
Paper & Materials	6
Symbols & Terminology	7
Angles	10
Right Angle	11
Going Full Circle in 22.5 Degrees	13
Going Full Circle in 30 Degrees	19
Triangles	23
Isosceles Triangle	24
Properties of 45°-45°-90° Triangles	25
Properties of 30°-60°-90° Triangles	27
Setting a Triangle Straight	29
Quadrilaterals	32
Parallel Lines	33
Parallel Lines to a Parallelogram	34
The Masquerading Parallelogram	36
Random Quadrilateral to a Parallelogram	38
Rhombus with Diagonals	40
Special Quadrilateral to a Rhombus	42
Rotated Square	44
Random Rhombus to a Rectangle	45
Special Quadrilateral to a Square	46
Extra-Special Quadrilateral to a Square	48
Tilings	50
Triangular Hexagonal Tiling	51
Tiling with Pentagons (Method 1)	56
Tiling with Pentagons (Method 2)	62
Tiling with Pentagons (Method 3)	65
Area	68
Seeing Both Sides Equally	69
Triangle Area	74
A Parallelogram and Its Area	77
Pythagorean Theorem	79
Pythagorean Theorem Dissection	84
Half a Square	87

Scaling and Symmetry 90
Scaled-Down Rectangle 91
More Scaled-Down Rectangles 93
Scaled-Down Squares 96
Isosceles Similar Triangle Raccoon 99
Reflective Owl 104
Symmetrical Puzzle 107
Matters of the Infinite 109
Folding in Half Exponentially 110
Geometric Series 112
Geometric Series Bug 117
Dissection Puzzles 118
Double Square Puzzle 119
Five Triangles Puzzle 123
Tangram Set 126
Other Topics 137
An Average Number Line 138
Universal Divider 141
Monty Hall Problem 146
Index 150
Recommended Reading 151