

# Maths Workout - Geometry & Measures

<b>Topic 22 - Pythagoras</b>				
<b>Target 1</b>	<b>Target 2</b>	<b>Target 3</b>	<b>Target 4</b>	<b>Target 5</b>
<i>Investigate, know and prove Pythagoras</i>	<i>Calculate the hypotenuse in a right angled triangle</i>	<i>Calculate a shorter side in a right angled triangle</i>	<i>Solve mixed problems using Pythagoras</i>	<i>Apply Pythagoras in 3D</i>
1. Distinguish between triangles with a right angle and triangles without	1. Demo: Calculate the hypotenuse in a right-angled triangle	1. Demo: Calculate a shorter side in a right-angled triangle	1. Use Pythagoras in a right-angled triangle; horizontal base; whole number starting values	1. Demo: Apply Pythagoras in 3D
2. Investigate Pythagoras by collecting data of side lengths, then squaring them	2. Demo: Calculate the hypotenuse in a right-angled triangle	2. Demo: Calculate a shorter side in a right-angled triangle	2. Use Pythagoras in a right-angled triangle; slant angle; decimal number starting values	2. Demo: Apply Pythagoras in 3D
3. Demo: Know Pythagoras' Theorem	3. Calculate the hypotenuse in a right-angled triangle; Pythagorean triples	3. Calculate a shorter side in a right-angled triangle; Pythagorean triples	3. Solve a problem in context using Pythagoras; diagram given	3. Apply Pythagoras in 3D in a cube; with diagrams
4. Demo: Prove Pythagoras' Theorem	4. Calculate the hypotenuse in a right-angled triangle; horizontal base; whole number sides	4. Calculate a shorter side in a right-angled triangle; horizontal base; whole number sides	4. Solve a problem in context using Pythagoras; diagram given	4. Apply Pythagoras in 3D in a cube; with diagrams
5. Engage with Pythagoras by creating a physical square on the 3 sides of a right angled triangle	5. Calculate the hypotenuse in a right-angled triangle; slant angle; whole number sides	5. Calculate a shorter side in a right-angled triangle; slant angle; whole number sides	5. Use Pythagoras in a complex diagram	5. Apply Pythagoras in 3D in a cuboid; with diagrams
6. Engage with Pythagoras by creating a physical square on the hypotenuse from squares on the other two sides; with guidance	6. Calculate the hypotenuse in a right-angled triangle; horizontal base; decimal sides	6. Calculate a shorter side in a right-angled triangle; horizontal base; decimal sides	6. Use Pythagoras in a complex diagram	6. Apply Pythagoras in 3D in a cuboid; with diagrams
7. Engage with Pythagoras by creating a physical square on the hypotenuse from squares on the other two sides; no guidance	7. Calculate the hypotenuse in a right-angled triangle; slant angle; decimal sides	7. Calculate a shorter side in a right-angled triangle; slant angle; decimal sides	7. Use Pythagoras twice in a complex diagram	7. Apply Pythagoras in 2D and 3D in a cuboid; with diagram
8. Engage with Pythagoras by creating a physical square on the hypotenuse from squares on the other two sides; no guidance; rotated			8. Solve problems with Pythagoras; no diagrams	8. Apply Pythagoras in 2D and 3D in a cuboid; with diagram
			9. Solve problems with Pythagoras; no diagrams	9. Solve problems in 3D without diagrams
			10. Solve problems with Pythagoras; find the area of an Isosceles triangle	
			11. Solve problems with Pythagoras; find the area of a shape	