

Foundation Geometry & Measures

GCSE Mathematics



Starters

Area of a Trapezium	$(8+5) \div 2 \times 6$	(1)
	$= 39\text{cm}^2$	(1)

Circle Parts	Tangent	(1)
--------------	---------	-----

3D shape	Square Based Pyramid	(1)
----------	----------------------	-----

Trig Values	$\cos 90^\circ = 0$	(1)
-------------	---------------------	-----

Enlargement	Circle with radius 4cm	(1)
-------------	------------------------	-----

Angles in a Triangle	$180 - 123 = 57^\circ$	(1)
	$180 - (57 + 57) = 66^\circ$	(1)

Main Course

Location, Location, Location	Two points 6cm apart	(1)
	Circles with radius 4cm and 5cm	(1)
	Identify 2 possible locations where circles intersect	(1)

400m running track	$\pi \times 2 \times 45.34 + 2 \times 84.39$	(1)	(1)
	$= 453.66 \text{ m}$	(1)	
	$453.66 - 400 = 53.66\text{m}$	(1)	

Foundation Geometry & Measures

GCSE Mathematics



Drink Can	$330\text{ml} = 330\text{cm}^3$	(1)	
	$r^2 = 330 \div 10 \pi$	(1)	
	$r = 3.24\text{cm}$	(1)	
Fixing the Roof	$3.6 - 2.8 = 0.8$	(1)	
	$2^2 + 0.8^2 = x^2$	(1)	
	$x = 2.15\text{m}$	(1)	
	Felt 2.15m by 4m	(1)	
Total Surface Area	$6x^2 = 486$	(1)	(1)
	$x = 9$	(1)	
Map Reading	$12.4 \times 50000 = 620\,000\text{ cm}$	(1)	
	$= 6.2\text{km}$	(1)	
	Time $= 6.2 \div 4 = 1.55\text{ hours}$	(1)	
	1 hour 33 minutes	(1)	
Dessert			
Triangle Dimensions	If a triangle is a right angled triangle then $a^2 + b^2 = c^2$	(1)	
	$8^2 + 6^2 \neq 9^2$ therefore incorrect dimensions	(1)	
Angles in a Polygon	Hexagon divided into 4 triangles with internal angles 180°	(1)	
	$4 \times 180 = 720^\circ$	(1)	

Foundation Geometry & Measures

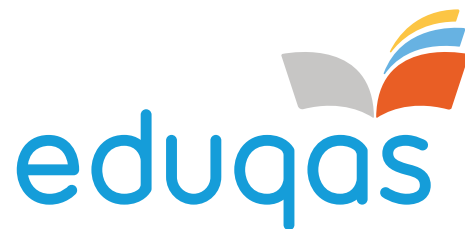
GCSE Mathematics



Vectors	$a - 2b + 3a + 5b$	(1)
	$4a + 3b$	(1)
Similar Triangles	If similar all sides increased by same scale factor	(1)
	$\frac{8}{10} \neq \frac{3}{4} \neq \frac{6}{7.5}$	(1)
	Or	
	$0.8 \neq 0.75 \neq 0.8$	(1)
Quadrilaterals	Rhombus is a parallelogram with all sides of equal length	(1)
	Not all parallelograms have equal sides therefore all cannot be a rhombus	(1)
Bearings	$180 - 72 = 108^\circ$ internal angles add to 180°	(1)
	$360 - 108 = 252^\circ$ angles at a point add to 360°	(1)
Drinks		
Constructing Triangles	5cm line drawn and 2 x 5cm arcs	(1)
	Where arcs intersect draw vertex creating triangle	(1)
Reflection	$A' (-1, 4)$	
	$B' (-4, 4)$	
	$C' (-1, 7)$	(2)

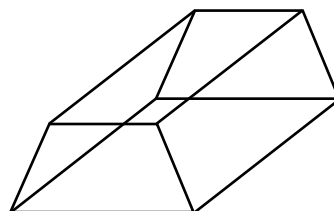
Foundation Geometry & Measures

GCSE Mathematics



Length of Arc	$\frac{20}{360} \times \pi \times 18$	(1)
	3.14 cm	(1)

Plans and Elevation		(2)
---------------------	--	-----



Finding Angles	$\sin \theta = \frac{5}{7}$	(1)
	$\theta = \sin^{-1} \frac{5}{7}$	(1)
	$\theta = 46^\circ$ with the ground.	(1)

Angles and Parallel Lines	$180 - 84 = 96^\circ$ internal add to 180°	(1)
	$y = 180 - (63 + 96)$ angles in triangle add to 180°	(1)
	$y = 21^\circ$	(1)