

GCSE MATHEMATICS

AQA | Edexcel | OCR | WJEC

(Level 3 - 6)

Pythagoras Theorem

Please write clearly in block capitals

Forename:	
Surname:	

Materials

For this paper you must have:

· mathematical instruments



You can use a calculator.

Instructions

- · Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- You may ask for graph paper, tracing paper and more answer paper.
 These must be tagged securely to this answer book.

Advice

In all calculations, show clearly how you work out your answer.

ABC is a r AB = 6 c AC = 8 c		,			(Level 3
AC - 0C	B			Not drawn accurately	
	6 cm				
	A	8 cm	c		
Calculate	the length of the missing	g side <i>BC</i> .			
					[2 marks]
					-
					-
					_

Turn over for next question

Answer

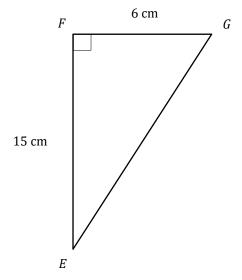
2

cm

2 *EFG* is a right-angled triangle. (Level 3)

$$FG = 6 \text{ cm}$$

$$EG = 15 \text{ cm}$$



Not drawn accurately

Calculate the length of the missing side EG.

				_	_
ro.	m	9	r	ks	1

Answer		cm



GCSE Maths Revision Guide

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- All exam boards AQA, OCR, Edexcel, WJEC
- Suitable for higher and foundation tiers

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	4		
3	ABC is a right-angled triangle. AB = 7.8 cm AC = 9.2 cm		(Level 4)
	9.2 cm B	Not drawn accurately	
	A 7.8 cm B Calculate the length of the missing side BC		
	Give your answer correct to 1 decimal place.		
			[3 marks]
			_
			_



Answer

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cm

Turn over ▶

3

	5		
4	PQR is a right angled triangle. PQ = 5.9 cm PR = 6.7 cm		(Level 4)
	Not drawn accurately 5.9 cm P 6.7 cm R		
4(a)	Calculate the length of the missing side QR . Give your answer correct to 1 decimal place.		[3 marks]
4(h)	AnswerCalculate the perimeter of the triangle <i>PQR</i> .	cm	
4(b)	Calculate the perimeter of the thangle PQN.		[1 mark]
	Answer	cm	

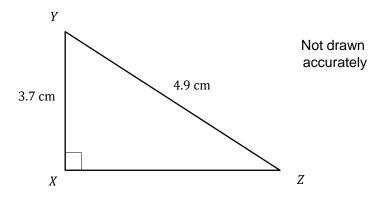
Turn over for next question

 $\it XYZ$ is a right-angled triangle. 5

(Level 4)

$$XY = 3.7 \text{ cm}$$

YZ = 4.9 cm



Calculate the area of the triangle.

[4 marks]

,	Answer		cm ²



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Αb	builder places a $3.6~\mathrm{m}$ ladder against a vertical wall as shown.	(Level
	3.6 m Not drawn accurately	
To		
	be safe to use, the base of this ladder must be 1.5 m away from the wall. e ladder is also placed on flat horizontal ground.	
	w far up the wall does the ladder reach?	
110	w fail up the wail does the ladder reach:	[3 marks
		Lo monto
		-
		-
		_
		_
	Answer m	
	Turn over for next question	
	Turn over for next question	
	Turn over for next question	
	Turn over for next question	

	LDC is an isospelas triangle	// 0.40/
	ABC is an isosceles triangle.	(Level
	M is the midpoint of the vertices A and C . The distance from A to B is 9 cm	
	The distance from A to C is 14 cm.	
ı	The distance from A to C is 14 cm.	
	\nearrow B	
	Not dra	awn accurate
	9 cm	
Α	M	C
	←	
	14 cm	
٧	Vork out the length of B to M .	
C	Give your answer to 1 decimal place.	
		[3 marl
_		
	Answer	
F	Find the area of the triangle.	
		[1 ma
_		
	Answer cr	m²
	Turn over for next question	

8	Two points have the coordinates (2, 3) and (7, 9).	(Level 5)
	Not drawn accurately ● (7,9)	
	(2,3)	
	Calculate the distance between the two points. Give your answer to 3 significant figures.	
		[4 marks]
	Answer	
	Turn over for next question	

9	The	diagram	below	shows	а	triangle
9	1110	ulaylalli	DCIOM	SHOWS	а	ulaligie

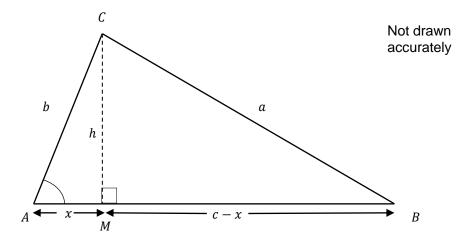
(Level 6)

MC is perpendicular to AB

$$AB = c$$

$$AM = x$$

$$MB = c - x$$



By applying Pythagoras' Theorem to triangles AMC and CMB

Show
$$c^2 - 2cx = a^2 - b^2$$

	[3 marks]
Answer	

End of questions