GCSE MATHEMATICS
AQA | Edexcel | OCR I WJEC

## 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.
$1 \quad A B C$ is a right-angled triangle with,
$A B=6 \mathrm{~cm}$
$A C=8 \mathrm{~cm}$


Not drawn accurately

Calculate the length of the missing side $B C$.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
Answer cm

## Turn over for next question

$2 E F G$ is a right-angled triangle.

$$
\begin{gathered}
F G=6 \mathrm{~cm} \\
E G=15 \mathrm{~cm}
\end{gathered}
$$



Not drawn accurately

Calculate the length of the missing side $E G$.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
Answer
cm


## GCSE Maths Revision Guide

() GCSE Maths Course 9-1 Revision Guide
() Exam Questions Included
() All exam boards - AQA, OCR, Edexcel, WJEC
() Suitable for higher and foundation tiers

Get it at mme.la/guide or scan the barcode

$3 \quad A B C$ is a right-angled triangle.
$A B=7.8 \mathrm{~cm}$
$A C=9.2 \mathrm{~cm}$


Not drawn accurately

Calculate the length of the missing side $B C$
Give your answer correct to 1 decimal place.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
Answer
cm
$4 \quad P Q R$ is a right angled triangle.
$P Q=5.9 \mathrm{~cm}$
$P R=6.7 \mathrm{~cm}$


4(a) Calculate the length of the missing side $Q R$.
Give your answer correct to 1 decimal place.
$\qquad$
$\qquad$
Answer
cm

4(b) Calculate the perimeter of the triangle $P Q R$.
$\qquad$
$\qquad$
$\qquad$
Answer $\qquad$ cm

Turn over for next question
$5 \quad X Y Z$ is a right-angled triangle.
$X Y=3.7 \mathrm{~cm}$
$Y Z=4.9 \mathrm{~cm}$


Calculate the area of the triangle.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
Answer
$\mathrm{cm}^{2}$


## GCSE Maths Revision Cards

© All major GCSE maths topics covered
(ح) Higher and foundation
() All exam boards - AQA, OCR, Edexcel, WJEC

$6 \quad$ A builder places a 3.6 m ladder against a vertical wall as shown.


Not drawn accurately

To be safe to use, the base of this ladder must be 1.5 m away from the wall.
The ladder is also placed on flat horizontal ground.
How far up the wall does the ladder reach?
$\qquad$
$\qquad$
$\qquad$
$\qquad$
Answer
m

## Turn over for next question

$7 \quad A B C$ is an isosceles triangle.
$M$ 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 .


7(a) Work out the length of $B$ to $M$.
Give your answer to 1 decimal place.
[3 marks]

Answer $\qquad$ cm

7(b) Find the area of the triangle.
$\qquad$
$\qquad$
$\qquad$
Answer $\qquad$ $\mathrm{cm}^{2}$

Turn over for next question

8 Two points have the coordinates $(2,3)$ and $(7,9)$.

## Not drawn accurately

- $(7,9)$
$(2,3)$

Calculate the distance between the two points.
Give your answer to 3 significant figures.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
Answer $\qquad$

## Turn over for next question

$9 \quad$ The diagram below shows a triangle.
$M C$ is perpendicular to $A B$
$A B=c$
$A M=x$
$M B=c-x$


By applying Pythagoras' Theorem to triangles $A M C$ and $C M B$
Show $c^{2}-2 c x=a^{2}-b^{2}$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
Answer

## End of questions

