

Congruent Shapes Worksheet

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Questions in past papers often come up combined with other topics.
Topic tags have been given for each question to enable you to know if you can do the question or whether you need to wait to cover the additional topic(s).

Scan the QR code(s) or click the link for instant detailed model solutions!

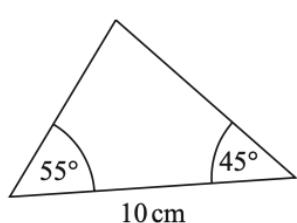
Qualification: GCSE Edexcel Higher

Areas: Shapes

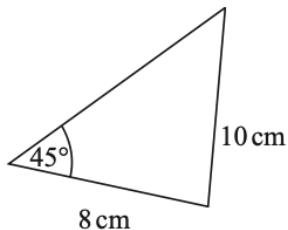
Subtopics: Congruent Triangles, Shape Properties

Paper: Paper-1H-Non-Calculator / Series: 2020-November / Difficulty: Easy / Question Number: 4

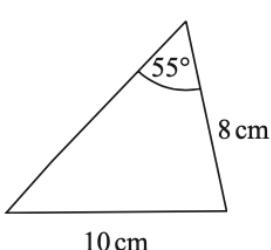
4 The diagram shows four triangles.



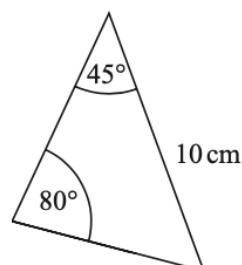
Triangle A



Triangle B



Triangle C



Triangle D

Two of these triangles are congruent.

Write down the letters of these two triangles.

..... and

(Total for Question 4 is 1 mark)

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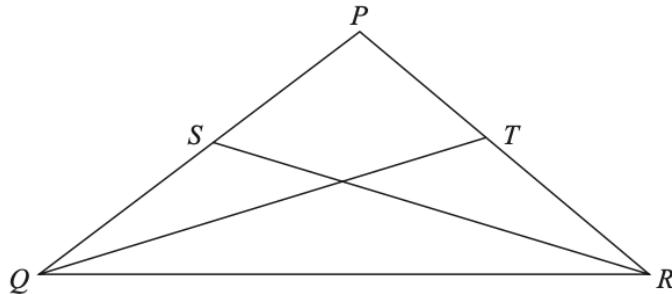
Qualification: GCSE Edexcel Higher

Areas: Geometry

Subtopics: Congruent Triangles, Midpoints, Geometric Proof

Paper: Paper-1H-Non-Calculator / Series: Specimen-Set-1 / Difficulty: Medium / Question Number: 17

17



$$PQ = PR.$$

S is the midpoint of PQ .

T is the midpoint of PR .

Prove triangle QTR is congruent to triangle RSQ .

(Total for Question 17 is 3 marks)

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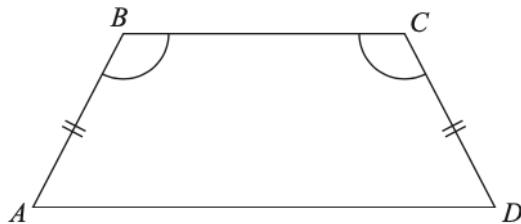
Qualification: GCSE Edexcel Higher

Areas: Shapes

Subtopics: Geometric Proof, Congruent Triangles

Paper: Paper-1H-Non-Calculator / Series: 2017-June / Difficulty: Somewhat Challenging / Question Number: 21

21 $ABCD$ is a quadrilateral.



$AB = CD$.

Angle ABC = angle BCD .

Prove that $AC = BD$.

(Total for Question 21 is 4 marks)

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Qualification: IGCSE Edexcel A Higher

Areas: Shapes

Subtopics: Congruent Triangles, Shape Properties, Shapes With Algebra

Paper: Paper-2HR / Series: 2020-January / Difficulty: Somewhat Challenging / Question Number: 12

- 12 The diagram shows two congruent isosceles triangles and parts of two congruent regular polygons, **X** and **Y**.

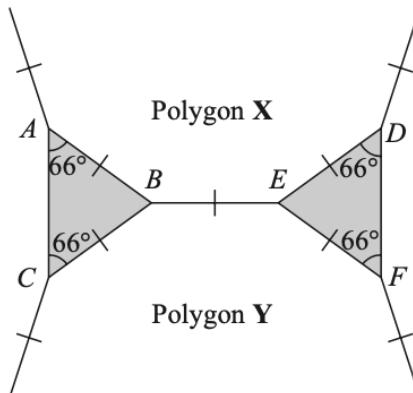


Diagram NOT
accurately drawn

The two regular polygons each have n sides.

Work out the value of n .

$n = \dots$

(Total for Question 12 is 3 marks)

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Qualification: IGCSE Edexcel A Higher

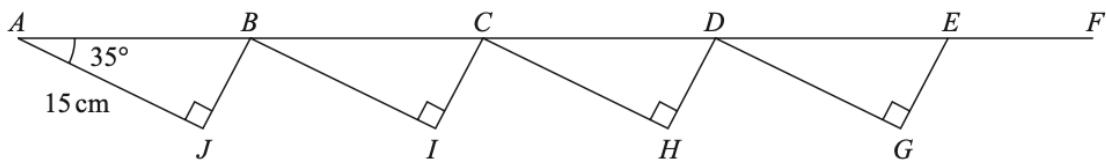
Areas: Shapes

Subtopics: Congruent Triangles, SOHCAHTOA

Paper: Paper-2HR / Series: 2020-November / Difficulty: Somewhat Challenging / Question Number: 13

- 13 The diagram shows four congruent right-angled triangles ABJ , BCI , CDH and DEG .
The diagram also shows the straight line $ABCDEF$.

Diagram **NOT**
accurately drawn



$AJ = 15 \text{ cm}$
Angle $BAJ = 35^\circ$

$AF = 80 \text{ cm}$

Work out the length of EF .
Give your answer correct to 3 significant figures.

..... cm

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(Total for Question 13 is 5 marks)



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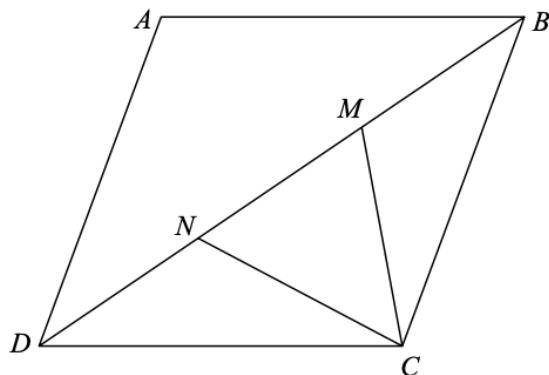
Qualification: GCSE Edexcel Higher

Areas: Geometry

Subtopics: Geometric Proof, Shape Properties, Congruent Triangles

Paper: Paper-3H-Calculator / Series: Sample-Set-2 / Difficulty: Somewhat Challenging / Question Number: 13

13 $ABCD$ is a rhombus.



M and N are points on BD such that $DN = MB$.

Prove that triangle DNC is congruent to triangle BMC .

(Total for Question 13 is 3 marks)

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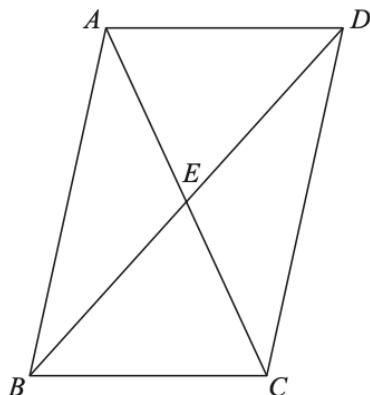
Qualification: GCSE Edexcel Higher

Areas: Geometry

Subtopics: Congruent Triangles, Geometric Proof, Angles in Parallel Lines, Shape Properties

Paper: Paper-1H-Non-Calculator / Series: Specimen-Set-2 / Difficulty: Somewhat Challenging / Question Number: 12

12 $ABCD$ is a parallelogram.



E is the point where the diagonals AC and BD meet.

Prove that triangle ABE is congruent to triangle CDE .

(Total for Question 12 is 3 marks)

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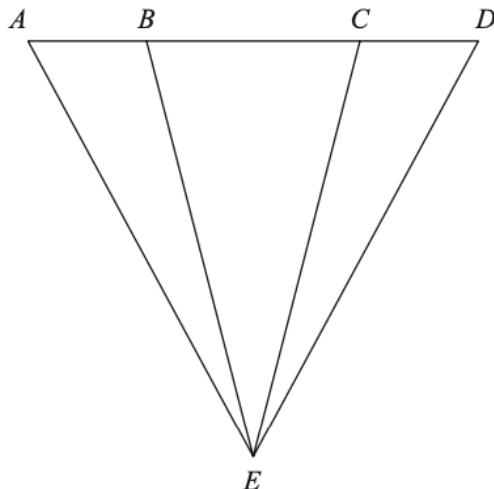
Qualification: GCSE Edexcel Higher

Areas: Geometry

Subtopics: Congruent Triangles, Geometric Proof, Shape Properties, Ratio

Paper: Paper-3H-Calculator / Series: 2022-November / Difficulty: Hard / Question Number: 20

20 The diagram shows a triangle ADE .



$$AE = DE$$

$$AB : BC : CD = 1 : 2 : 1$$

Prove that triangle ACE is congruent to triangle DBE .

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(Total for Question 20 is 3 marks)



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