Congruent Shapes Worksheet

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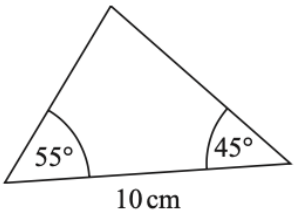
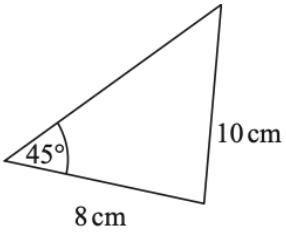
Questions in past papers often come up combined with other topics.
Topic tags have been given for each question to enable you to know if you can do the question or whether you need to wait to cover the additional topic(s).

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

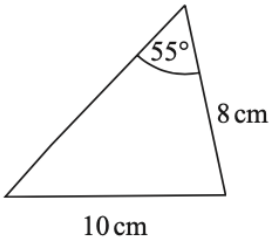
4 The diagram shows four triangles.



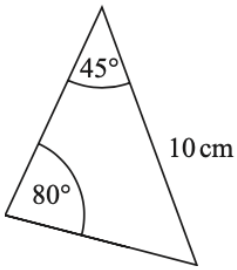
Triangle **A**



Triangle **B**



Triangle **C**



Triangle **D**

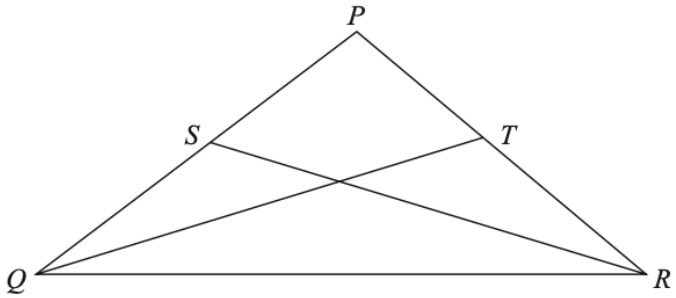
Two of these triangles are congruent.

Write down the letters of these two triangles.

..... and .....

(Total for Question 4 is 1 mark)

17

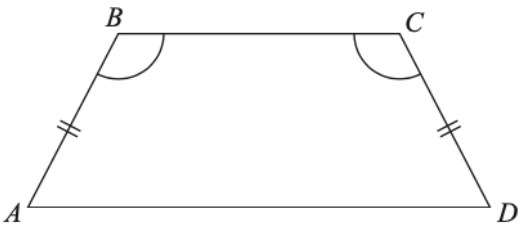


$PQ = PR$.
S is the midpoint of PQ.
T is the midpoint of PR.

Prove triangle QTR is congruent to triangle RSQ.

(Total for Question 17 is 3 marks)

21 $ABCD$ is a quadrilateral.



$AB = CD$.
Angle ABC = angle BCD.

Prove that $AC = BD$.

(Total for Question 21 is 4 marks)

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**.

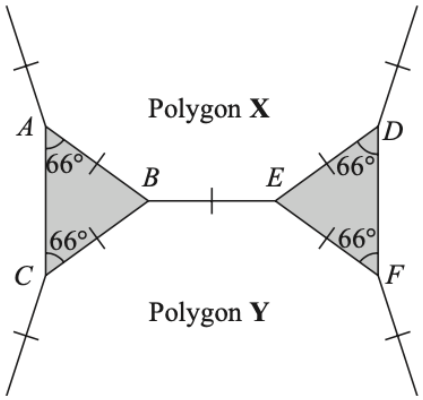


Diagram **NOT** accurately drawn

The two regular polygons each have n sides.

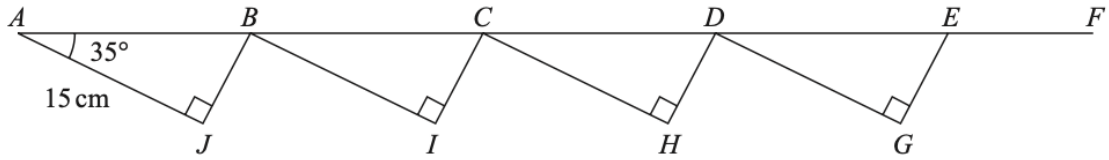
Work out the value of n.

$n =$ .....

(Total for Question 12 is 3 marks)

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 cm
Angle *BAJ* = 35°

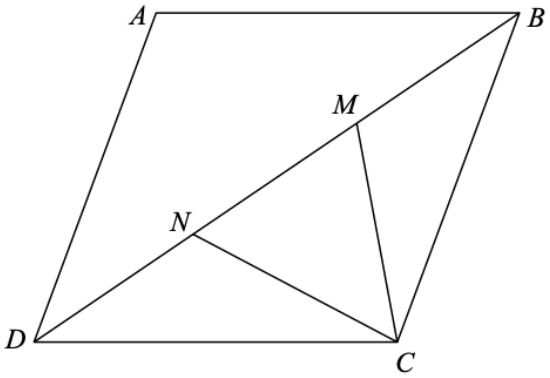
AF = 80 cm

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

..... cm

(Total for Question 13 is 5 marks)

13 $ABCD$ is a rhombus.

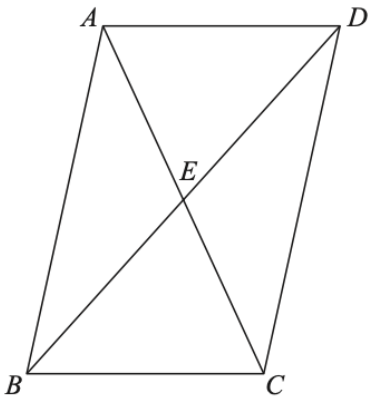


M and N are points on BD such that $DN = MB$.

Prove that triangle DNC is congruent to triangle BMC.

(Total for Question 13 is 3 marks)

12 $ABCD$ is a parallelogram.

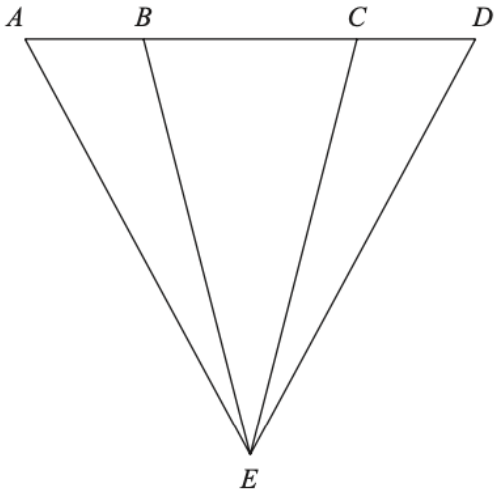


E is the point where the diagonals AC and BD meet.

Prove that triangle ABE is congruent to triangle CDE.

(Total for Question 12 is 3 marks)

20 The diagram shows a triangle ADE.



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

Prove that triangle ACE is congruent to triangle DBE.

(Total for Question 20 is 3 marks)