

Name:

Exam Style Questions

Congruent Triangles



Corbettmaths

Equipment needed: Ruler, Pencil, Calculator, Pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

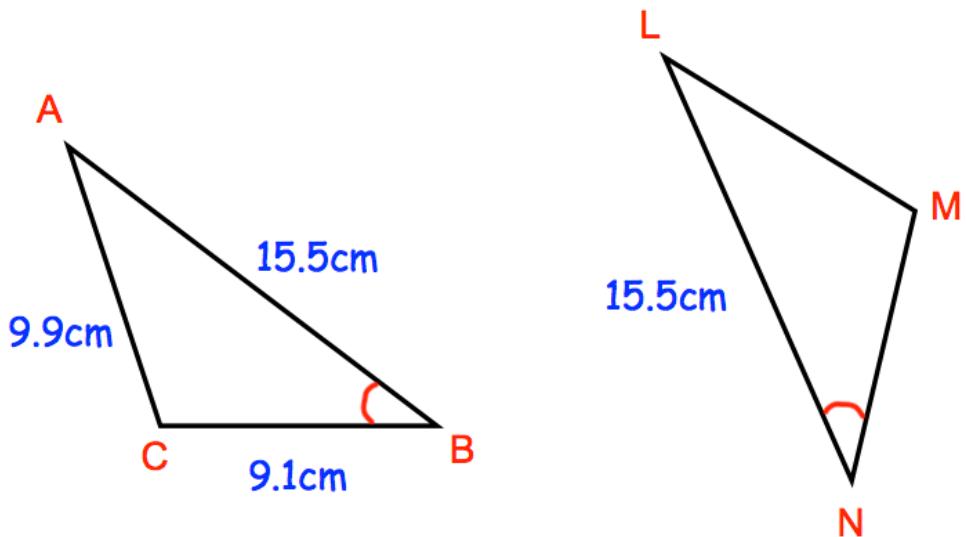
Videos 67, 328



Answers and Video Solutions



1. ABC and LMN are congruent triangles.
Angle B = Angle N



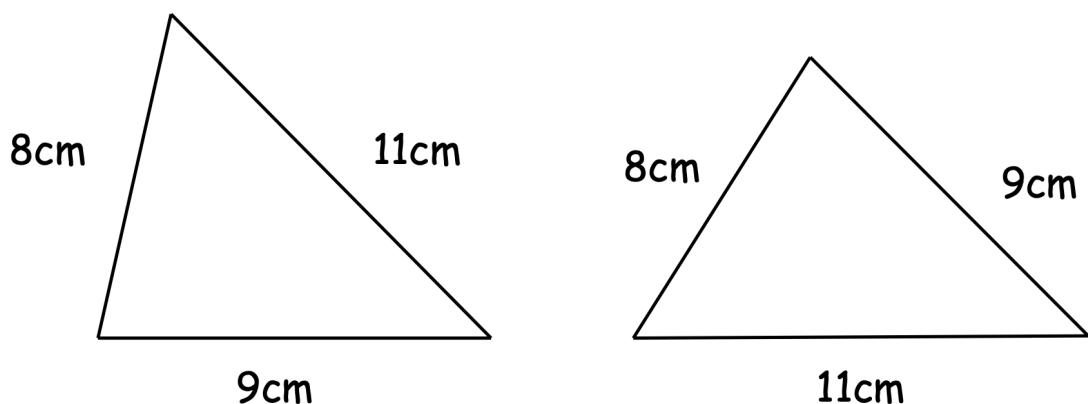
(a) Write down the length of MN.

.....
.....
.....
(1)

(b) Explain why angle A = angle L

.....
.....
.....
(2)

2. Shown below are two congruent triangles.



Circle the reason why the two triangle are congruent.

RHS

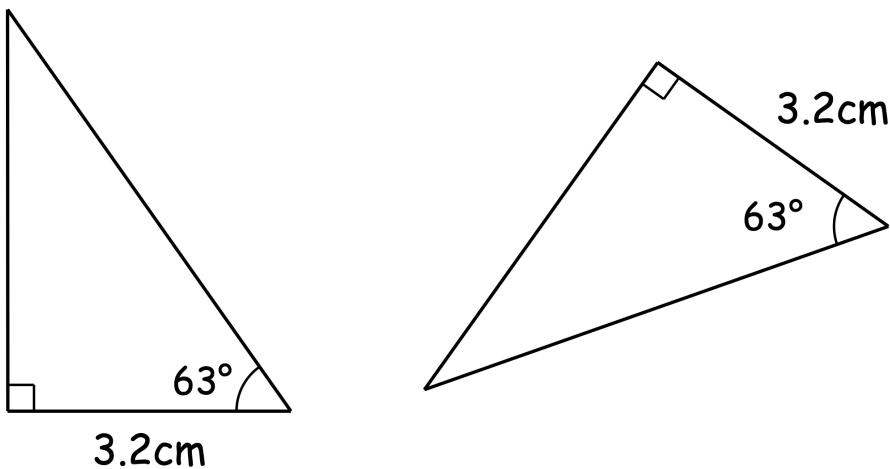
SAS

ASA

SSS

(1)

3. Shown below are two congruent triangles.



Circle the reason why the two triangle are congruent.

RHS

SAS

ASA

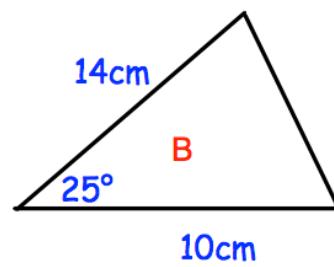
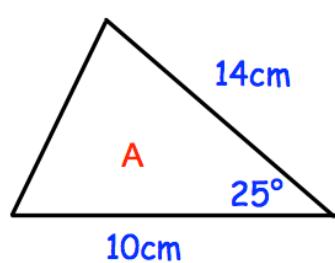
SSS

(1)

4. For each pair below, state the condition why they are congruent.



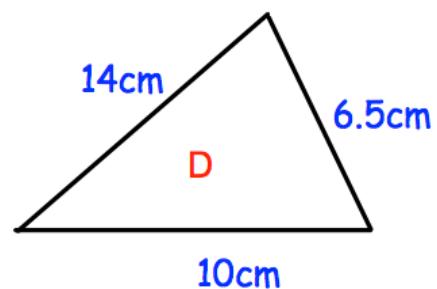
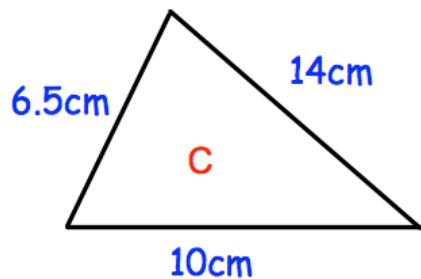
(a)



Condition:

(1)

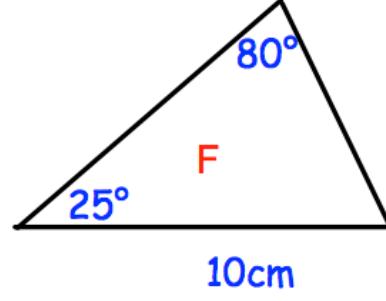
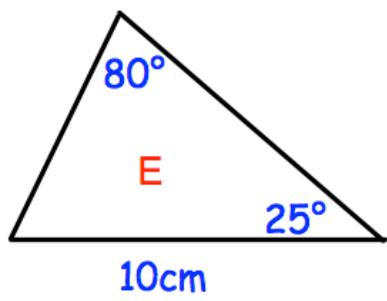
(b)



Condition:

(1)

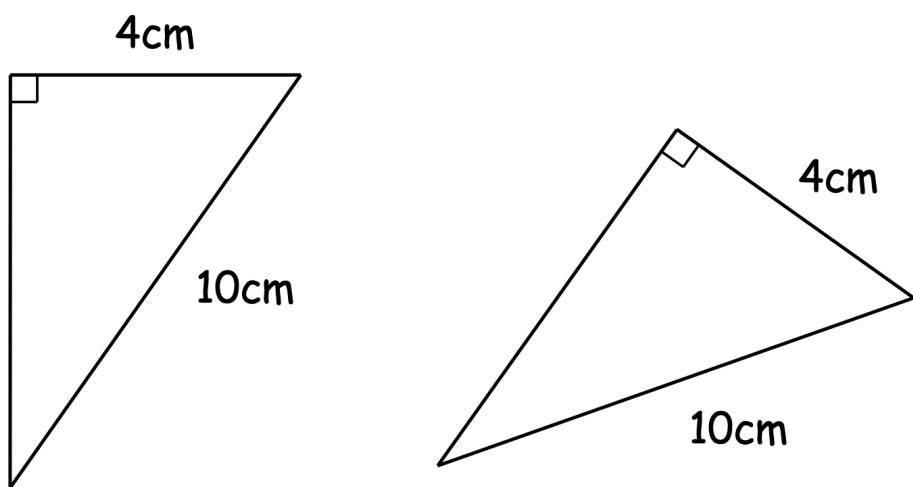
(c)



Condition:

(1)

5. Shown below are two congruent triangles.



Circle the reason why the two triangle are congruent.

RHS

SAS

ASA

SSS

(1)

6. James and Chris each draw a triangle with one side of 10cm, one angle of 45° and one angle of 85°



James says their triangles are congruent.

Explain why James is incorrect.

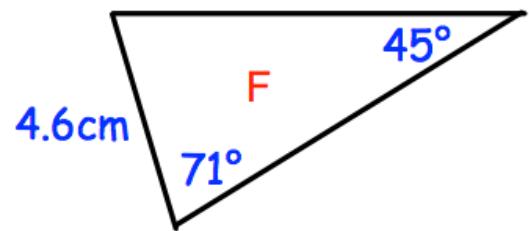
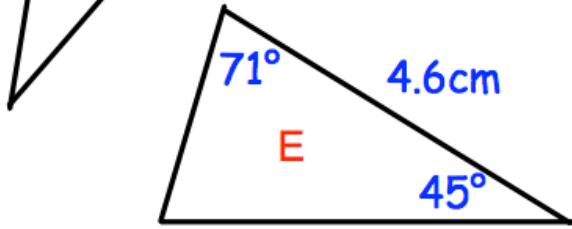
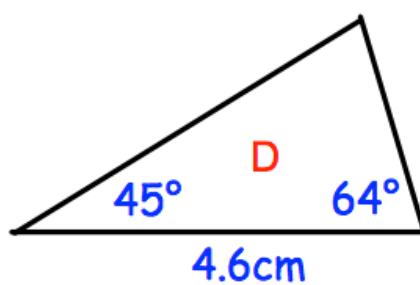
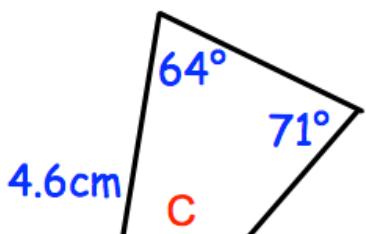
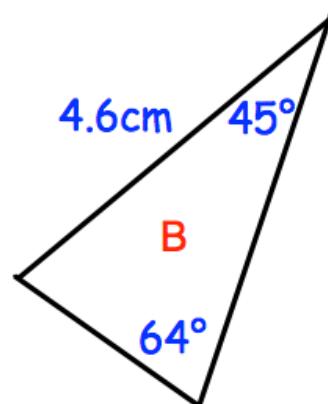
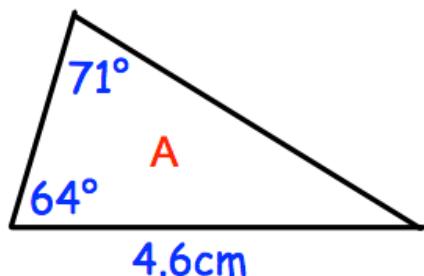
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(2)

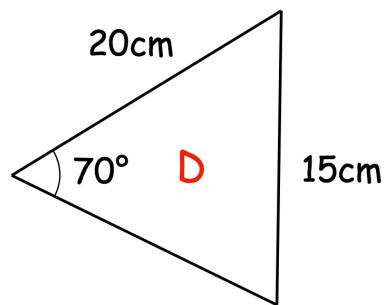
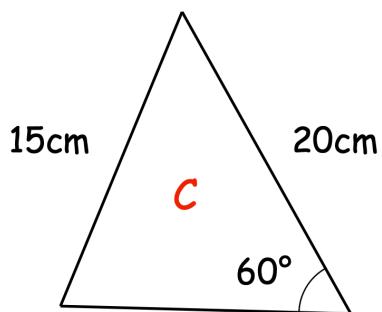
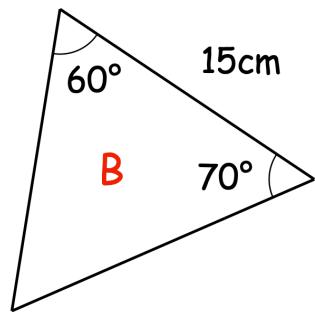
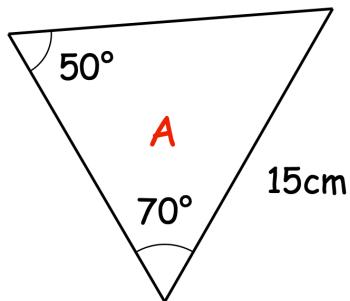
7. Shown below are six triangles that are not drawn accurately.



Which two triangles are congruent to triangle A?

..... and
(2)

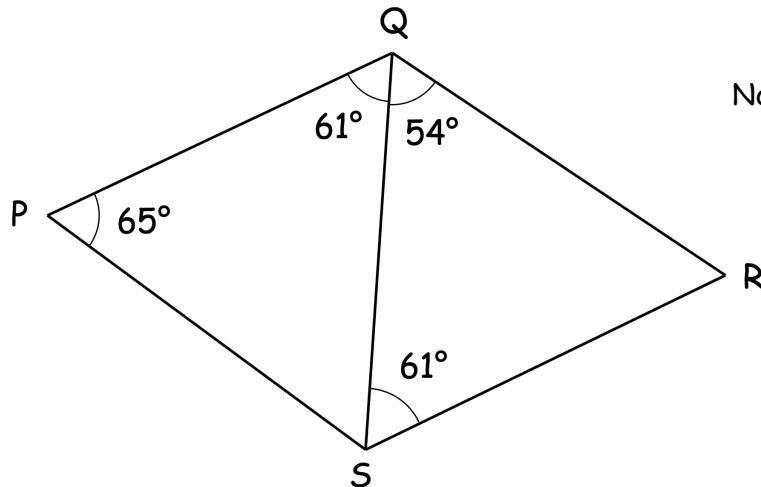
8. Shown below are four triangles.



Which two triangles are congruent?

..... and
(2)

9. Shown below are two triangles, PQS and QRS.



Not drawn accurately

Prove triangles PQS and QRS are congruent.

(3)

10. Oscar says



“AAA can be used to prove two triangles are congruent.”

Evan says

“AAA can be used to prove two triangles are similar.”

Who is correct?

Explain your answer.

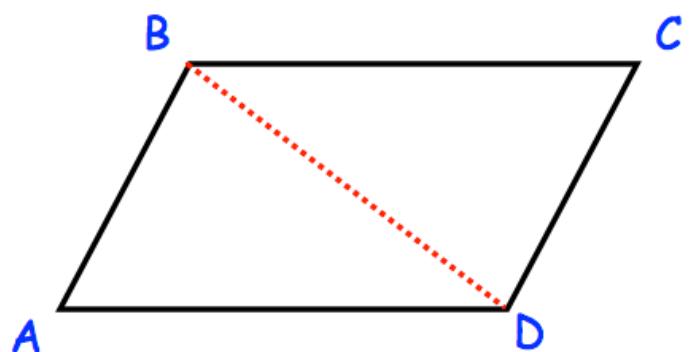
.....

.....

.....

(2)

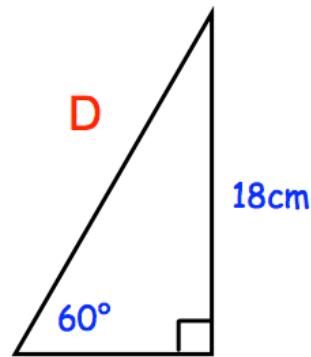
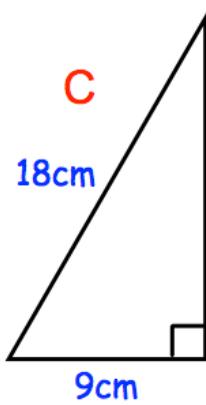
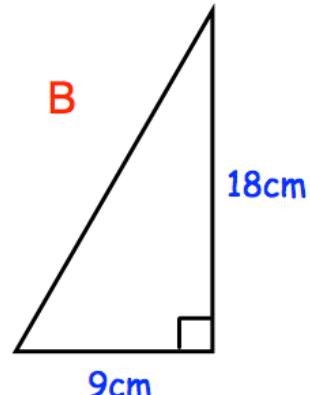
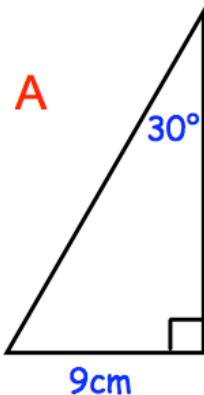
11. ABCD is a parallelogram.



Prove that triangles ABD and BCD are congruent.

(4)

12. Two of the triangles below are congruent.



Identify the two congruent triangles and explain your answer.

..... and

Reason:

.....

.....

.....

.....

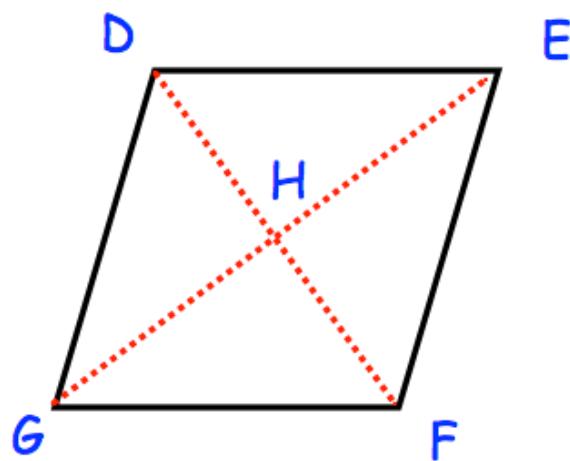
.....

.....

(4)

13. The diagram shows a rhombus DEFG.

The diagonals intersect at H.



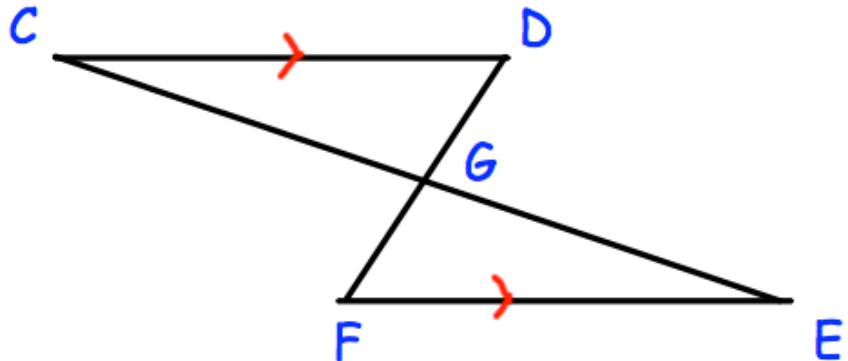
Prove triangles DGH and EFH are congruent.

(4)

14. In the diagram, the lines CE and DF intersect at G .



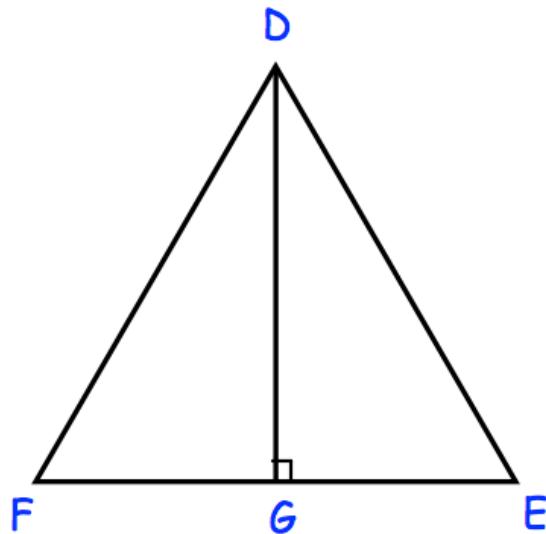
CD and FE are parallel and $CD = FE$.



Prove that triangles CDG and EFG are congruent.

(4)

15. DEF is an equilateral triangle.



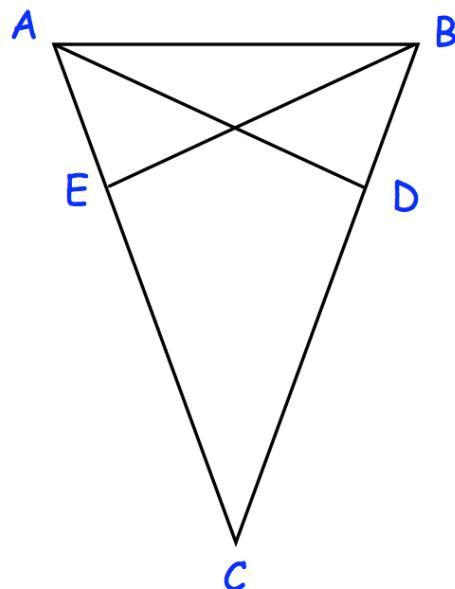
G lies on EF.

DG is perpendicular to FE.

Prove DFG is congruent to DEG.

(3)

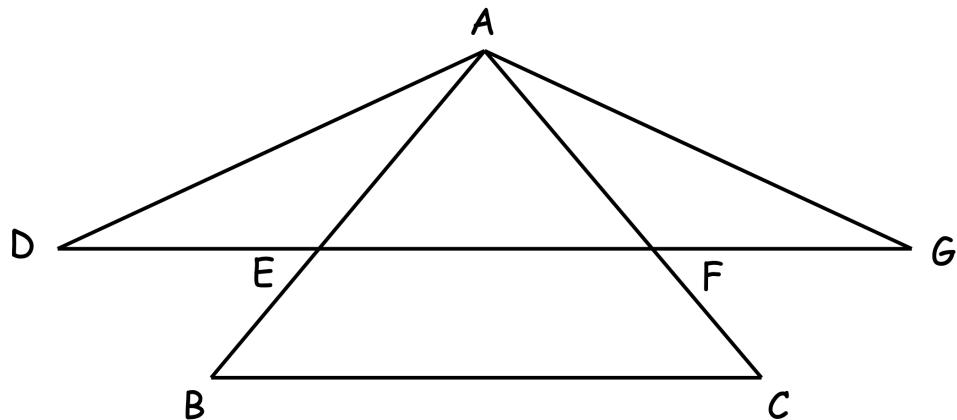
16. ABC is an isosceles triangle in which $AC = BC$.
D and E are points on BC and AC such that $CE = CD$.



Prove triangles ACD and BCE are congruent.

(4)

17. The diagram below shows triangles ABC and ADG.



The lines DG and BC are parallel.

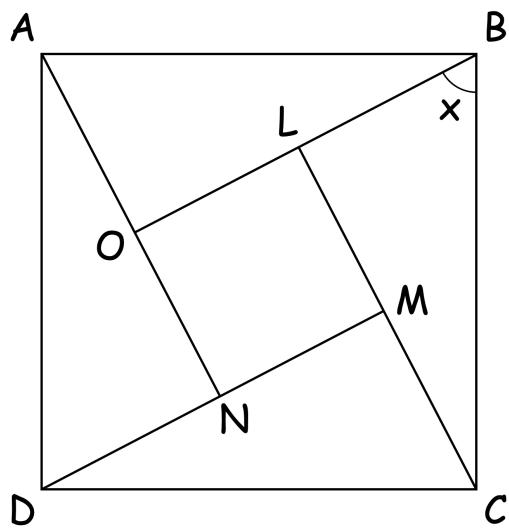
$$DF = EG \qquad AB = AC$$

Prove triangle ADE is congruent to triangle AFG.

(4)

18. ABCD and LMNO are squares.

Angle CBL = x



Prove that triangles ABO and CBL are congruent.

(4)