



**THIRD SPACE  
LEARNING**

# Congruent Triangles Worksheet

**Geometry**

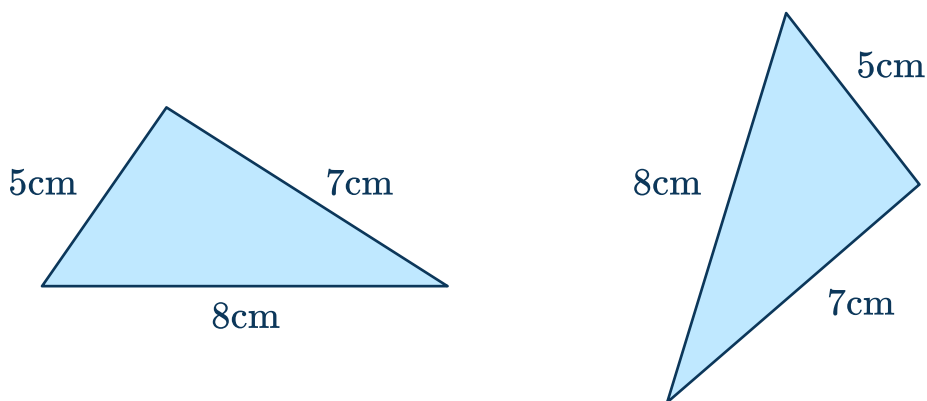
**Grades 6 to 8**

## Questions

Name: .....

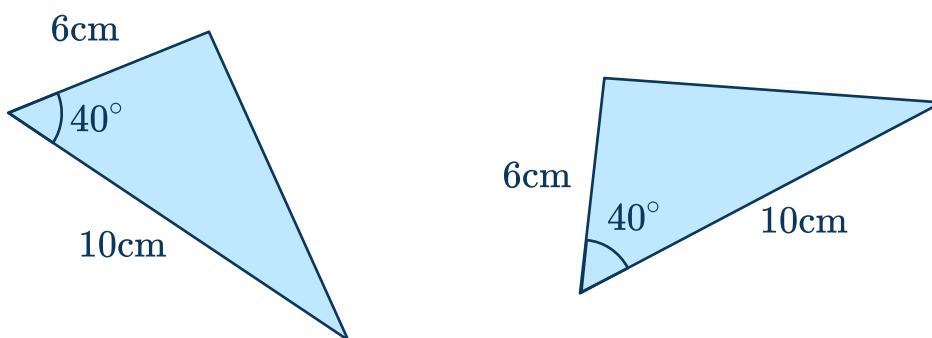
Date: .....

- 1 Decide whether this pair of triangles is congruent. If they are congruent, state why.



Answer

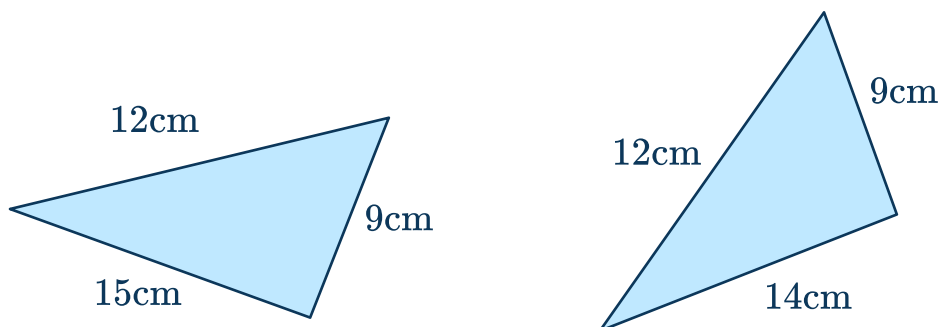
- 2 Are these triangles congruent? Explain why or why not.



Answer

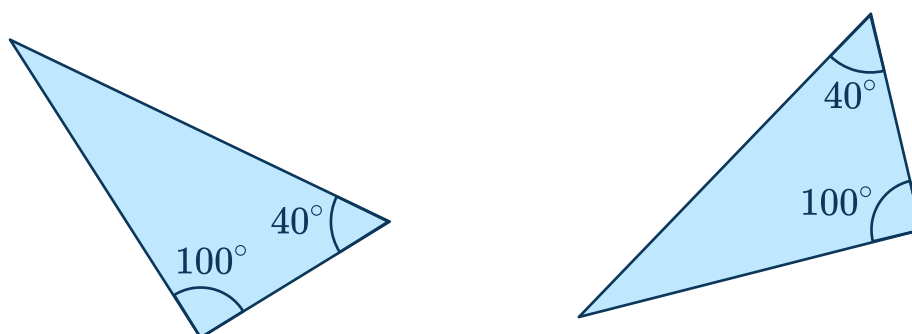
## Congruent Triangles Worksheet | Grades 6 to 8

3 Are the triangles below congruent? Why or why not?



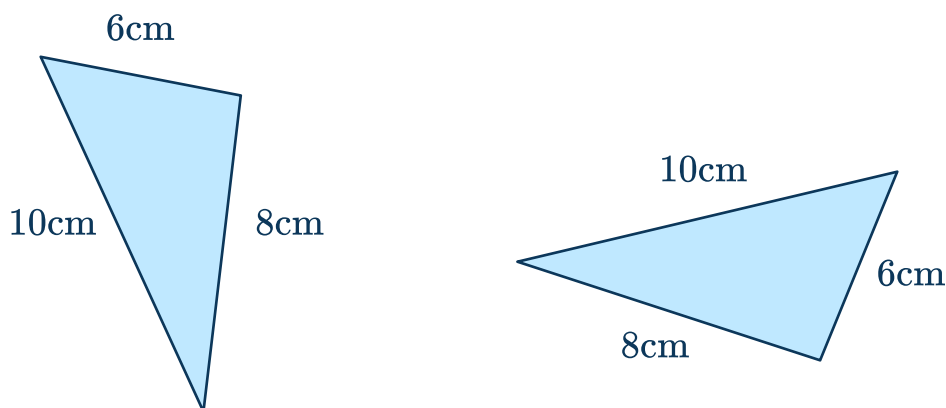
Answer

4 Determine if these triangles are congruent. If they are, explain why.



Answer

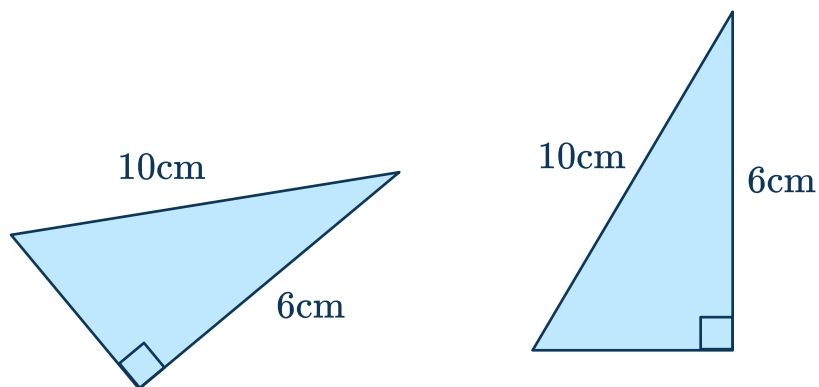
5 Decide if the triangles shown are congruent. State the reason if they are.



Answer

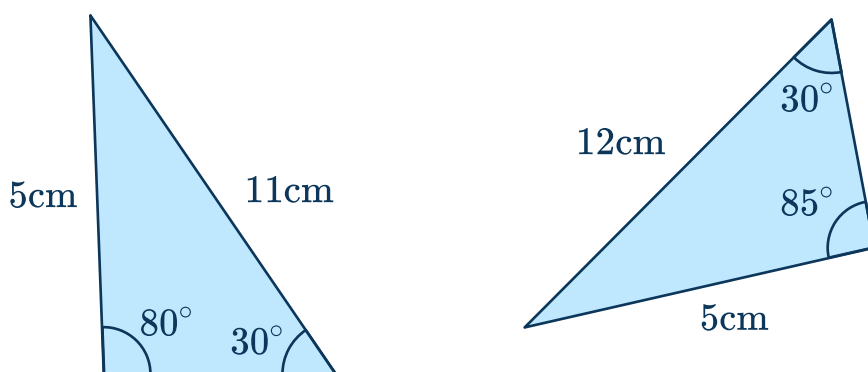
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6 Are these triangles congruent? Why or why not?



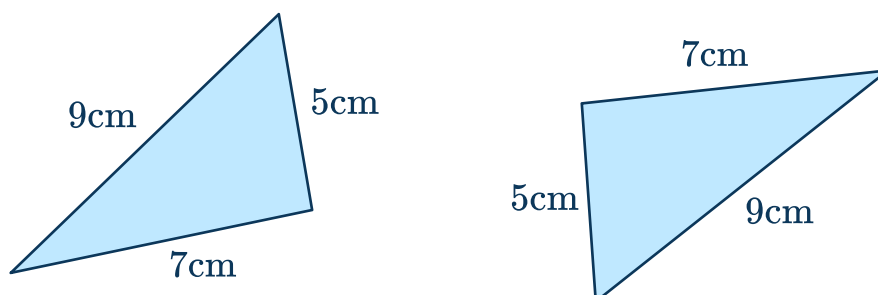
Answer

7 Decide if the triangles are congruent. Give a reason.



Answer

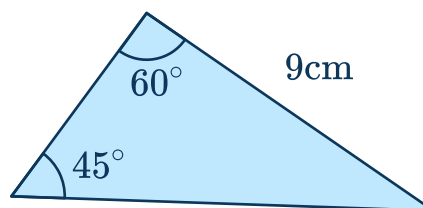
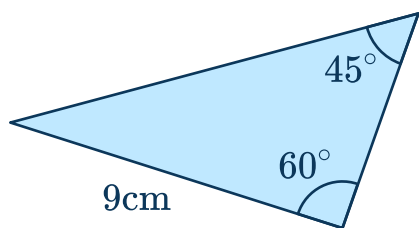
8 Are these triangles congruent? Explain why or why not.



Answer

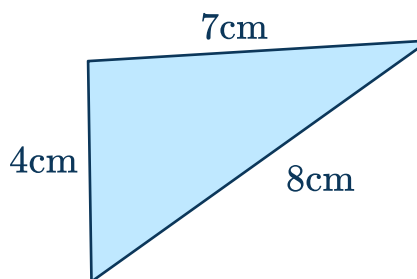
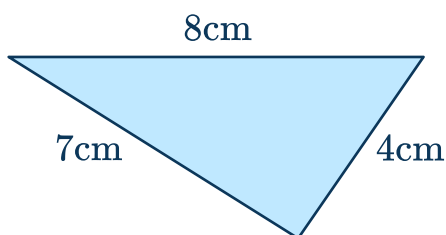
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- 9 Determine if these triangles are congruent. If they are, explain why.



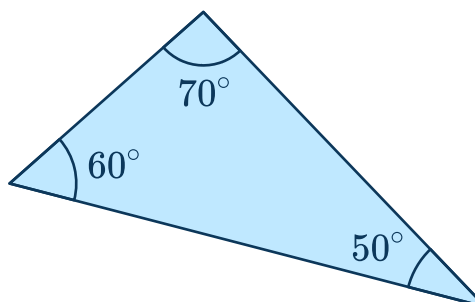
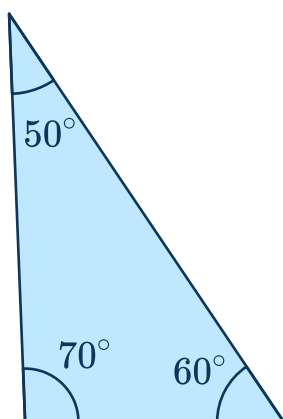
Answer

- 10 Are these triangles congruent? Why or why not?



Answer

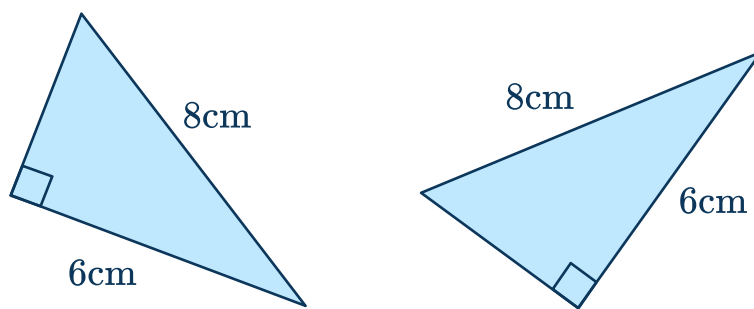
- 11 Decide if the triangles are congruent. State a reason.



Answer

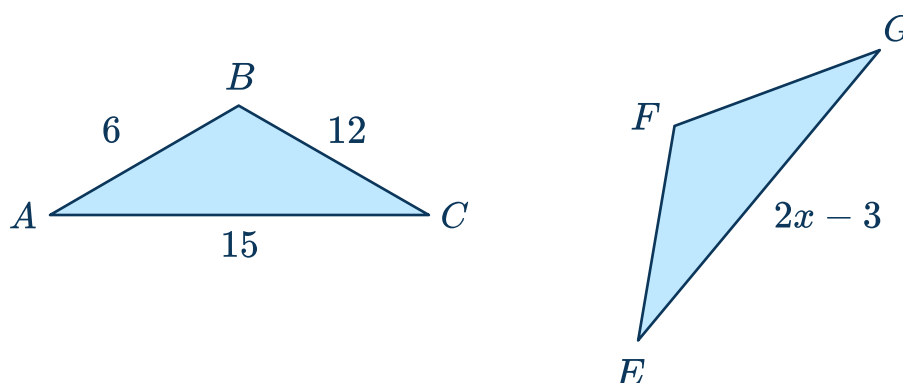
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- 12 Are the triangles below congruent? If yes, state the reason.



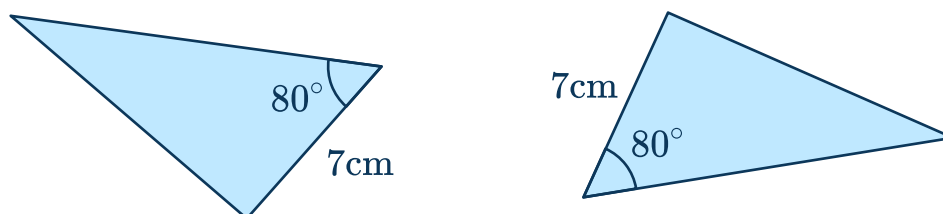
Answer

- 13 Triangle ABC is congruent to triangle EFG. Find the value of  $x$ .



Answer

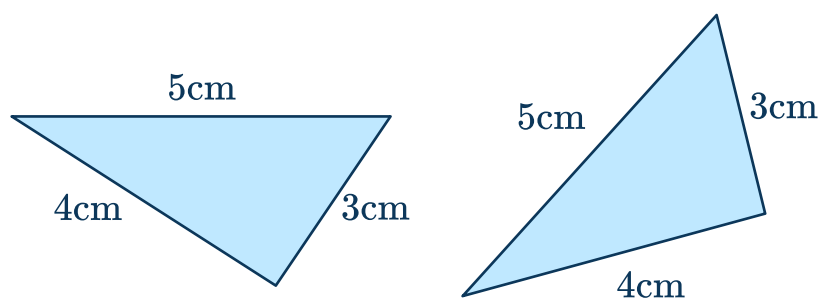
- 14 Are these triangles congruent? State the reason if they are.



Answer

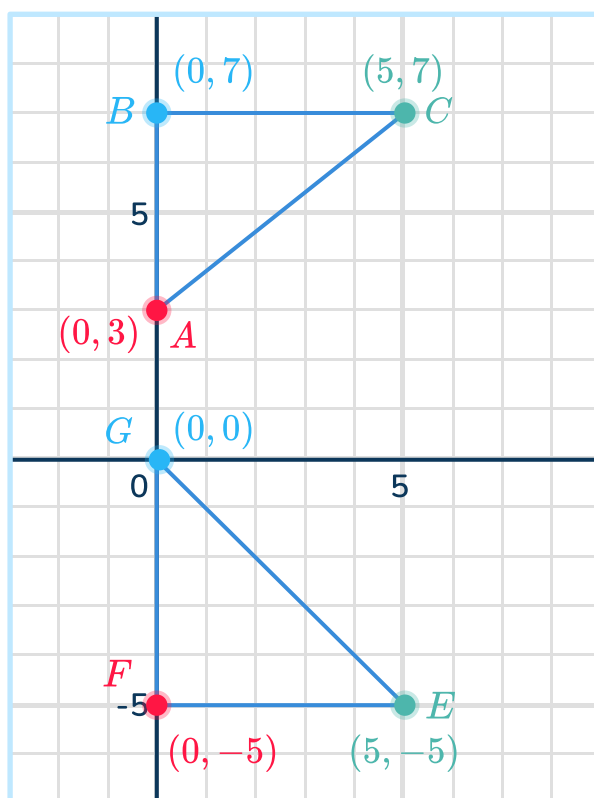
## Congruent Triangles Worksheet | Grades 6 to 8

- 15 Decide if the triangles are congruent. Provide an explanation.



Answer

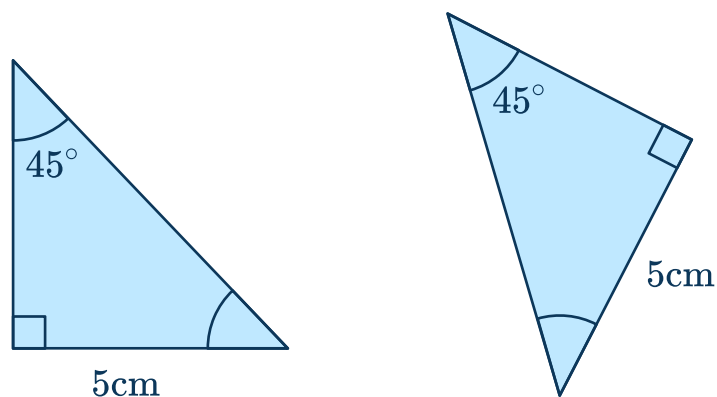
- 16 Are these triangles congruent? Why or why not?



Answer

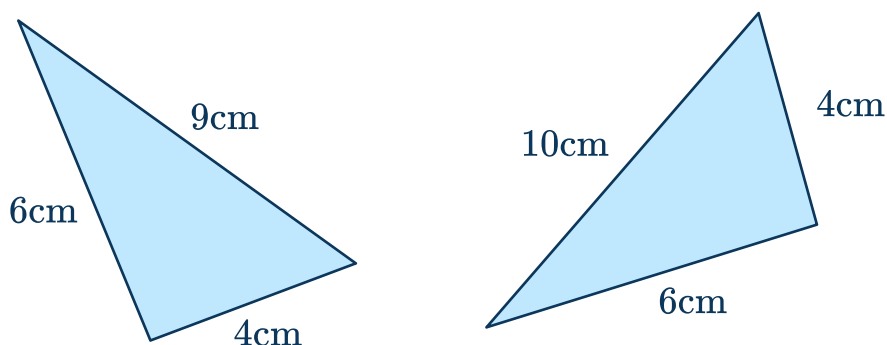
## Congruent Triangles Worksheet | Grades 6 to 8

- 17 Determine if the triangles are congruent. If yes, give a reason.



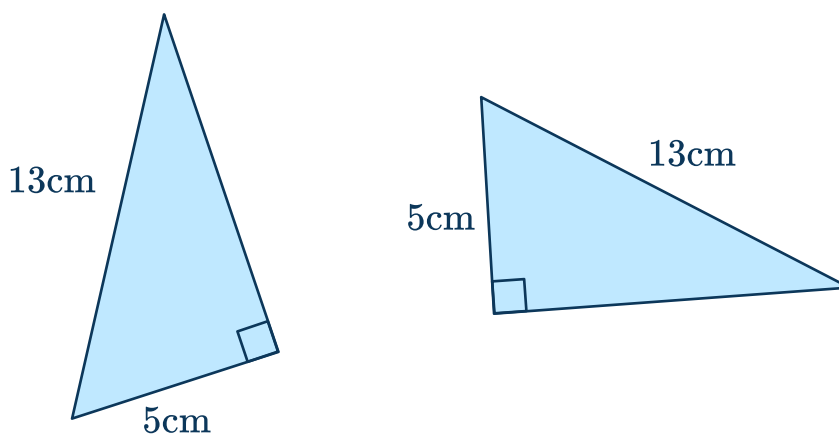
Answer

- 18 Are these triangles congruent? State the reason if they are.



Answer

- 19 Decide if the triangles shown are congruent. Explain why or why not.



Answer

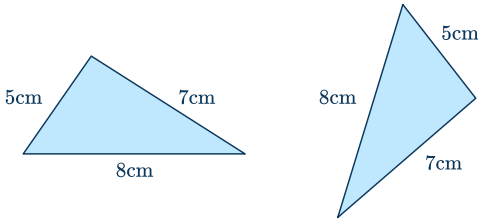
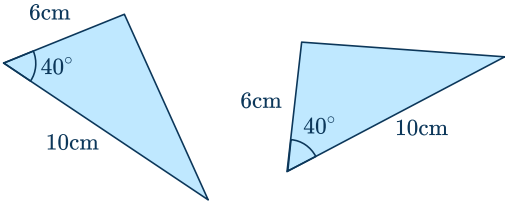
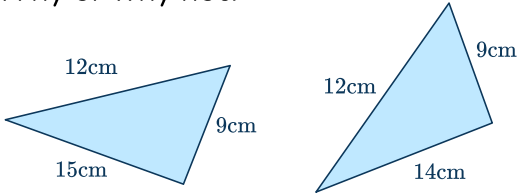
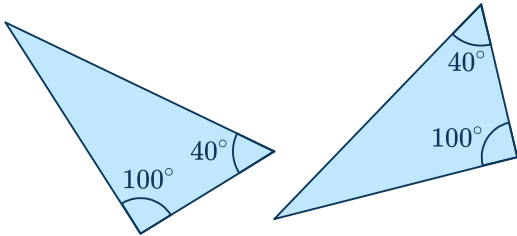


## Congruent Triangles Worksheet | Grades 6 to 8

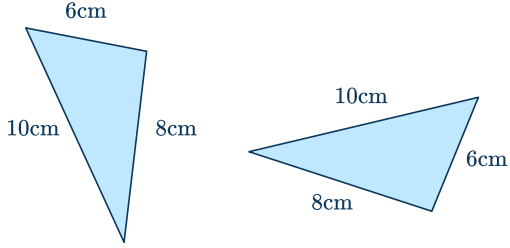
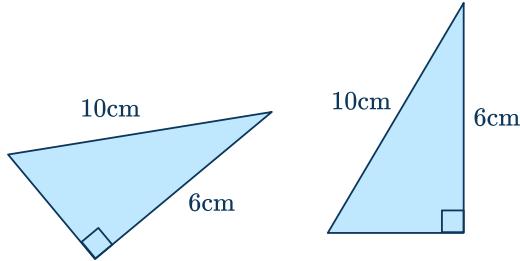
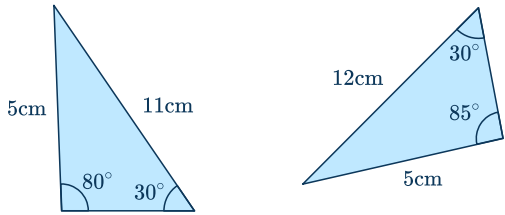
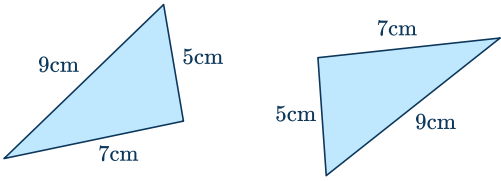
- 20 If three angles of one triangle are congruent to the corresponding three angles of another triangle, are the triangles congruent?

*Answer*

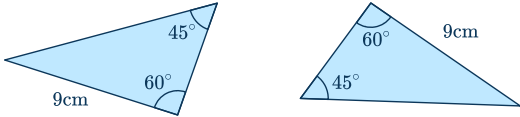
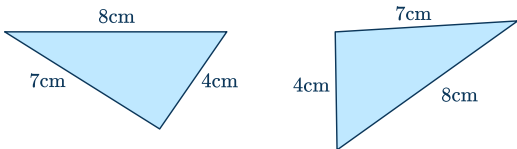
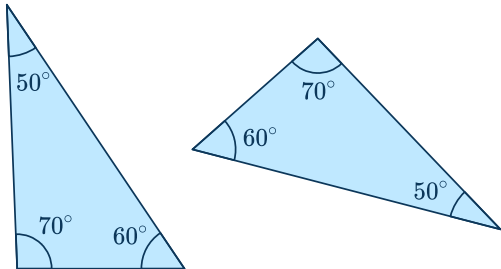
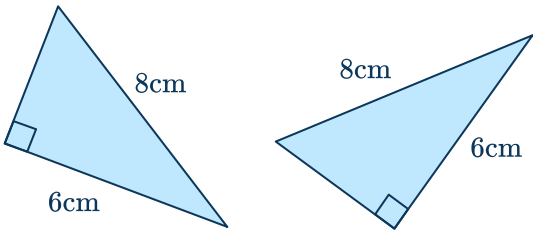
# Answers

Question number	Question	Answers	Standard
1	<p>Decide whether this pair of triangles is congruent. If they are congruent, state why.</p> 	<p>Yes, they are congruent by SSS (Side-Side-Side) because all three sides are equal.</p>	8.G.A.2
2	<p>Are these triangles congruent? Explain why or why not.</p> 	<p>Yes, they are congruent by SAS (Side-Angle-Side) because two sides and the included angle are equal.</p>	8.G.A.2
3	<p>Are the triangles below congruent? Why or why not?</p> 	<p>No, they are not congruent because one pair of sides does not match.</p>	8.G.A.2
4	<p>Determine if these triangles are congruent. If they are, explain why.</p> 	<p>The triangles are not necessarily congruent because you do not have any information about the sides. Knowing just the angle measurements is not enough to prove that the triangles are congruent.</p>	8.G.A.2

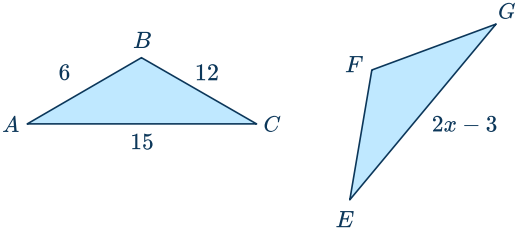
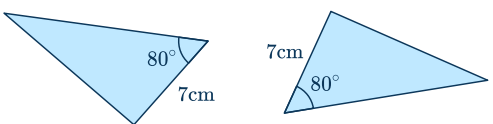
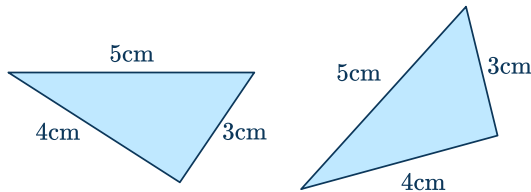
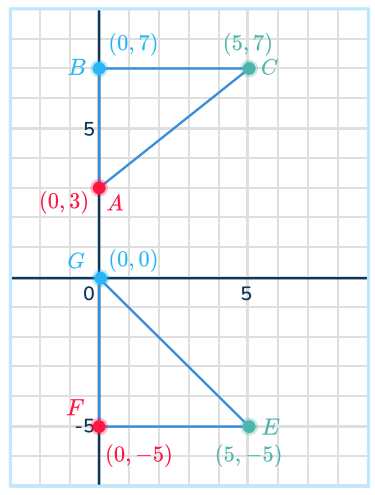
## Congruent Triangles Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
5	<p>Decide if the triangles shown are congruent. State the reason if they are.</p> 	Yes, they are congruent by SSS as all sides are equal.	8.G.A.2
6	<p>Are these triangles congruent? Why or why not?</p> 	Yes, they are congruent by HL (Hypotenuse-Leg) because the hypotenuse and one leg are equal.	8.G.A.2
7	<p>Decide if the triangles are congruent. Give a reason.</p> 	No, they are not congruent because only one side and one angle are equal.	8.G.A.2
8	<p>Are these triangles congruent? Explain why or why not.</p> 	Yes, they are congruent by SSS as all three sides are equal.	8.G.A.2

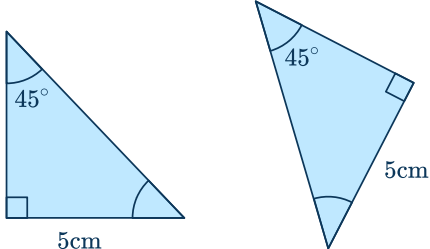
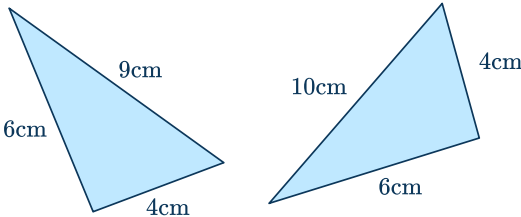
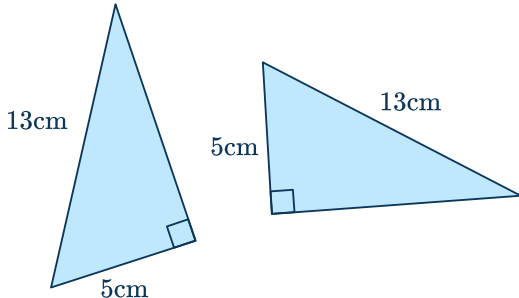
## Congruent Triangles Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
9	<p>Determine if these triangles are congruent. If they are, explain why.</p> 	Yes, they are congruent by ASA (Angle-Side-Angle) because two angles and the included side are equal.	8.G.A.2
10	<p>Are these triangles congruent? Why or why not?</p> 	Yes, they are congruent by SSS as all sides are equal.	8.G.A.2
11	<p>Decide if the triangles are congruent. State a reason.</p> 	Not enough information to prove that the triangles are congruent without knowing any side measurements. Knowing just the angle measurements is not enough to prove that the triangles are congruent.	8.G.A.2
12	<p>Are the triangles below congruent? If yes, state the reason.</p> 	Yes, they are congruent by LL (Leg-Leg) because both legs are equal.	8.G.A.2

# Congruent Triangles Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
13	<p>Triangle ABC is congruent to triangle EFG. Find the value of <math>x</math>.</p> 	$2x - 3 = 15$ $2x = 18$ $x = 9$	8.G.A.2
14	<p>Are these triangles congruent? State the reason if they are.</p> 	No, they are not congruent because not enough information is given to prove congruence.	8.G.A.2
15	<p>Decide if the triangles are congruent. Provide an explanation.</p> 	Yes, they are congruent by SSS as all three sides are equal.	8.G.A.2
16	<p>Are these triangles congruent? Why or why not?</p> 	No, the triangles are not congruent because the sides are not the same length. $AB = 4$ units and $FG = 5$ units.	8.G.A.2

## Congruent Triangles Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
17	<p>Determine if the triangles are congruent. If yes, give a reason.</p> 	Yes, they are congruent by ASA as two angles and the included side are equal.	8.G.A.2
18	<p>Are these triangles congruent? State the reason if they are.</p> 	No, they are not congruent because one pair of sides does not match.	8.G.A.2
19	<p>Decide if the triangles shown are congruent. Explain why or why not.</p> 	Yes, they are congruent by HL as the hypotenuse and one leg are equal.	8.G.A.2

## Congruent Triangles Worksheet | Grades 6 to 8 | Answers




Question number	Question	Answers	Standard
20	If three angles of one triangle are congruent to the corresponding three angles of another triangle, are the triangles congruent?	The triangles can be congruent but they also may not be congruent. Knowing just the angle measurements of two triangles is not enough to prove that they are congruent. For example, two equilateral triangles have the same angle measurements but one of them can have side measurements of 5 units and the other can have side measurements of 8 units. They are not congruent.	8.G.A.2

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