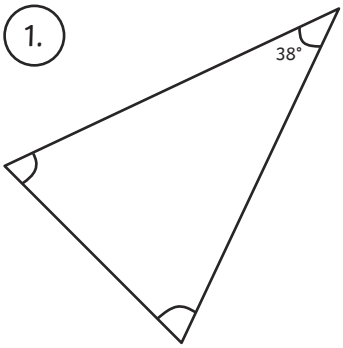
Calculating Angles in a Triangle

Using your knowledge of known facts about triangles, calculate the size of the missing angles in the triangles below. Angles are not to scale.

1.



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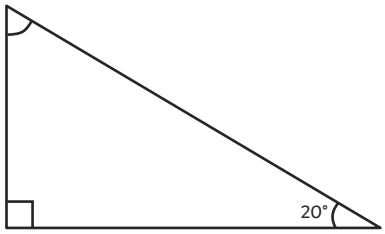

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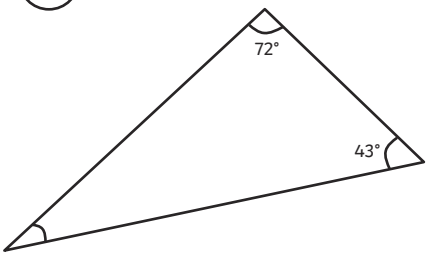

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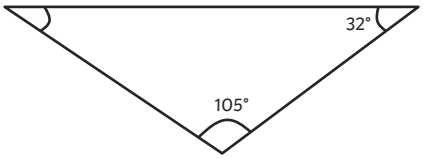

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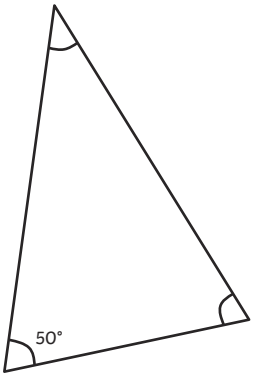

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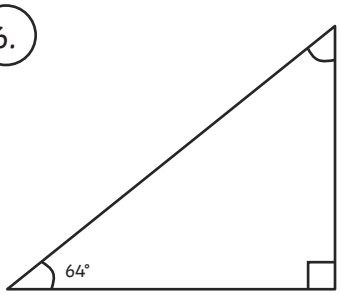

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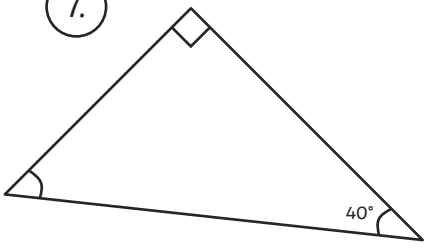

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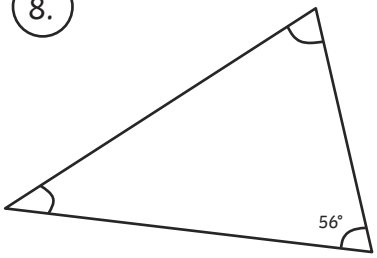

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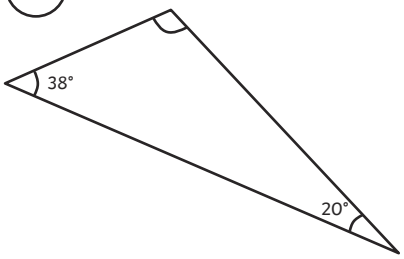

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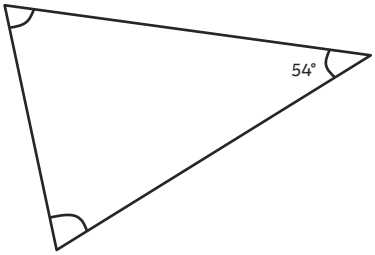

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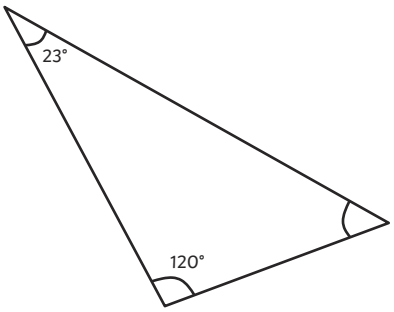

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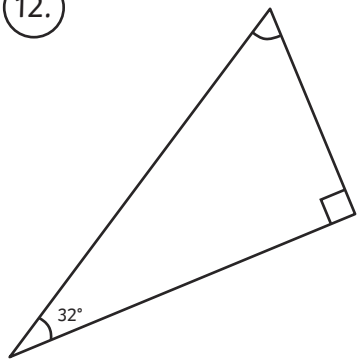
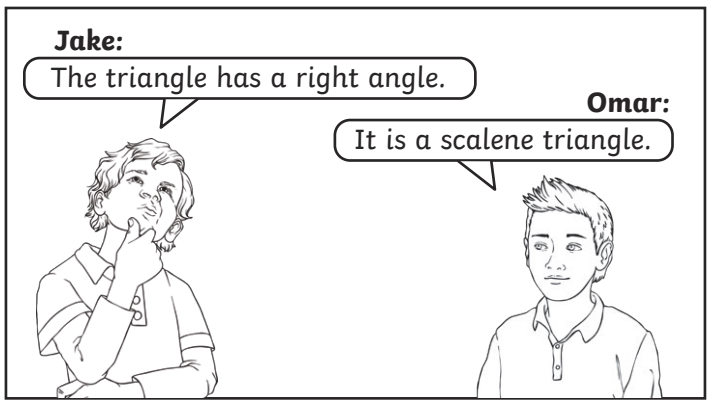


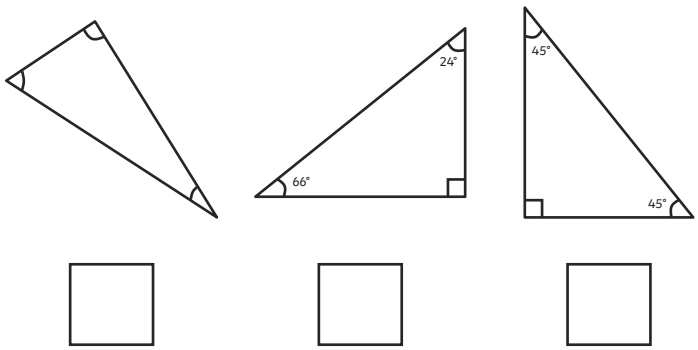
1. Ellie has measured the three angles in a triangle. One angle is 61° and another is 77°. What is the measurement of the third angle?

_____

2. Jake, Omar and Saskija are playing a game. Jake and Omar must give Saskija clues to help her find the triangle that matches theirs.

Which triangle should Saskija choose? Angles are not to scale.

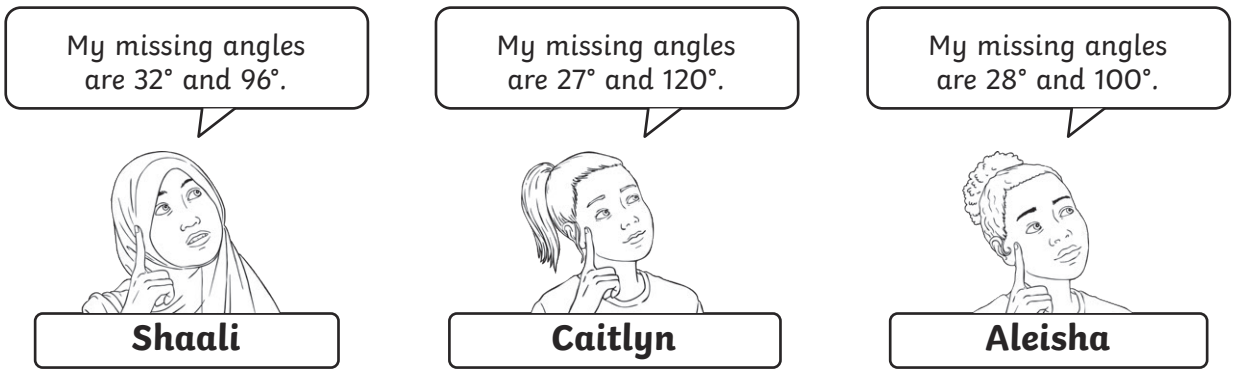




3. Dara is trying to solve a riddle. Her only clue is that the ratio of the three angles in the mystery triangle is 2:3:4. Calculate the size of the angles and write them below from smallest to largest:

_____ _____ _____

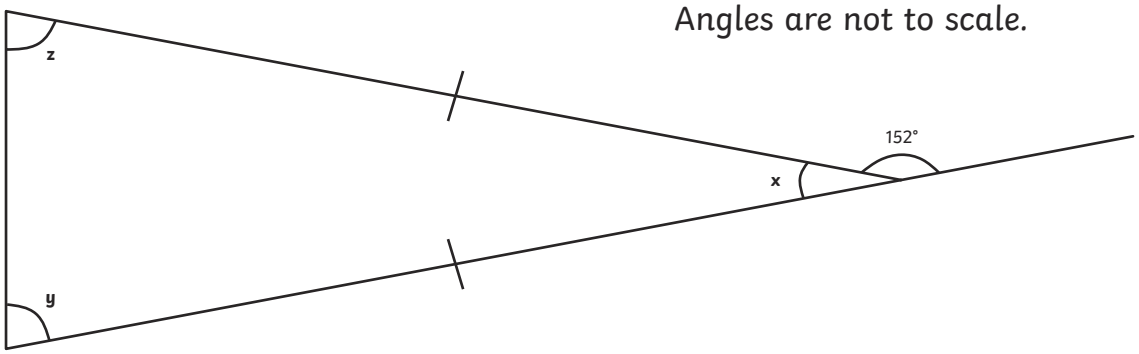
4. Shaali, Caitlyn and Aleisha are investigating scalene triangles. They have each been given a scalene triangle with one 52° angle labelled for them and two missing angles that they must measure.



One of them has made a mistake. Who was it? _____

5. Find the size of all of the angles in the triangle.

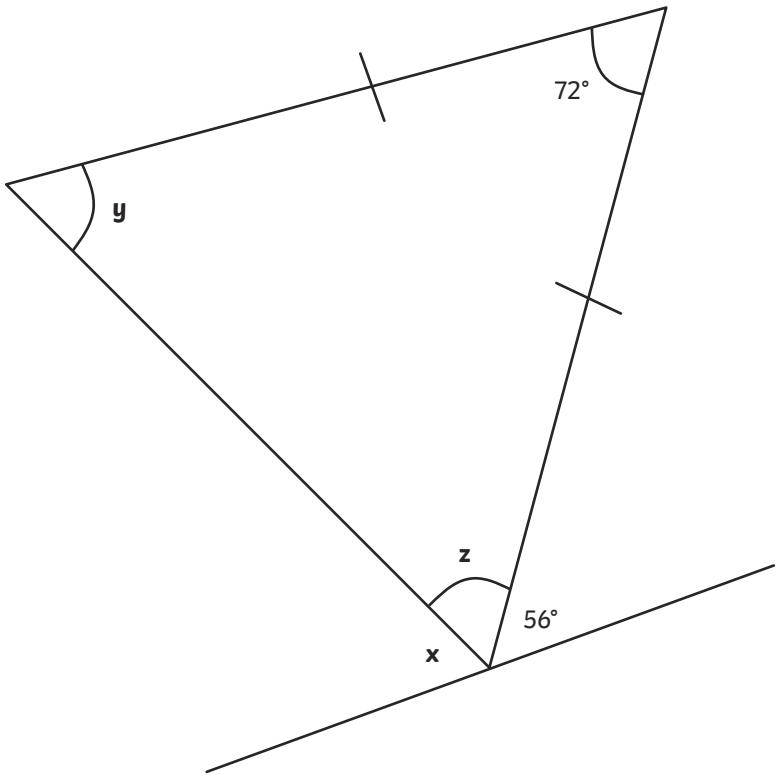
Angles are not to scale.



x= _____ ° y= _____ ° z= _____ °

6. Calculate the missing angles.

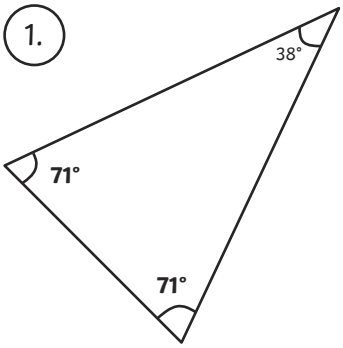
Angles are not to scale.



x= _____ ° y= _____ ° z= _____ °

Calculating Angles in a Triangle **Answers**

1.



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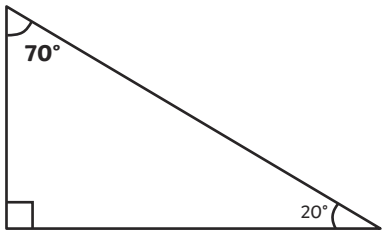

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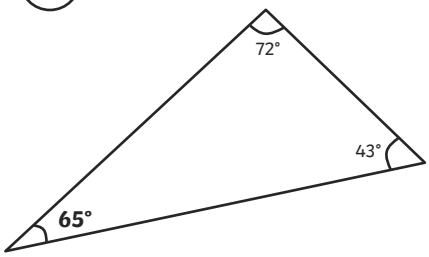

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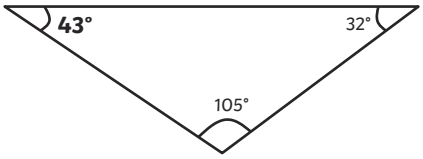

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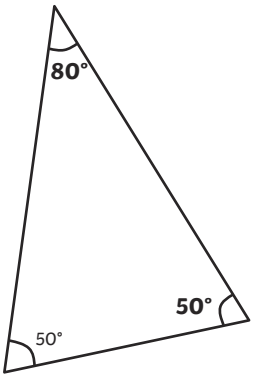

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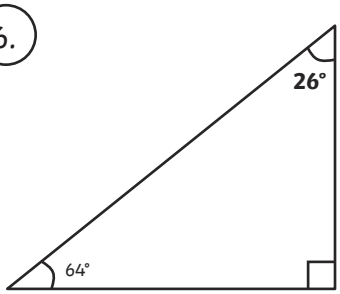

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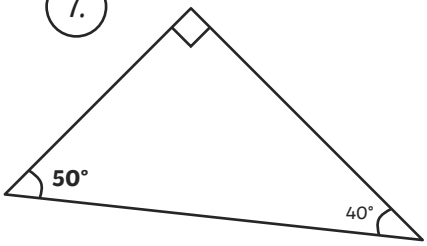

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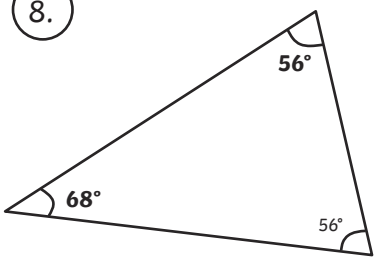

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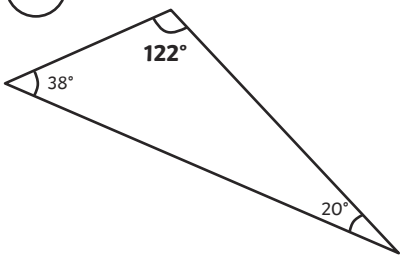

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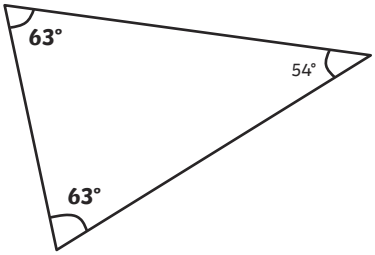

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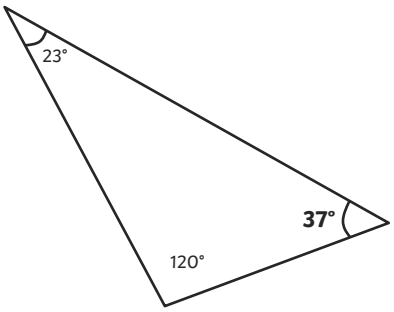

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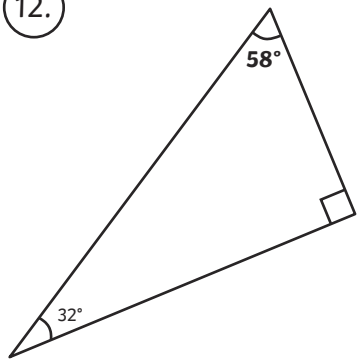
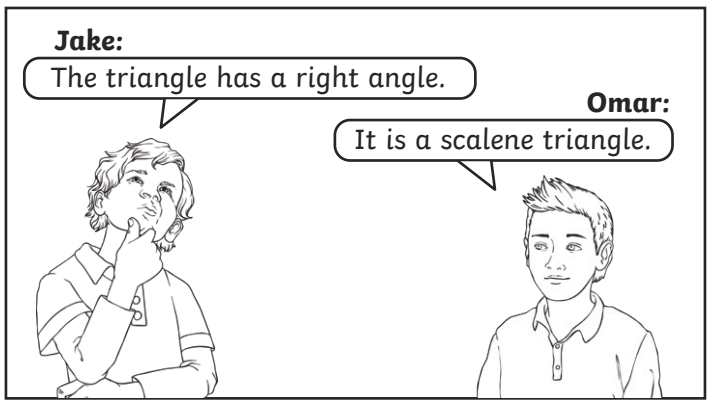


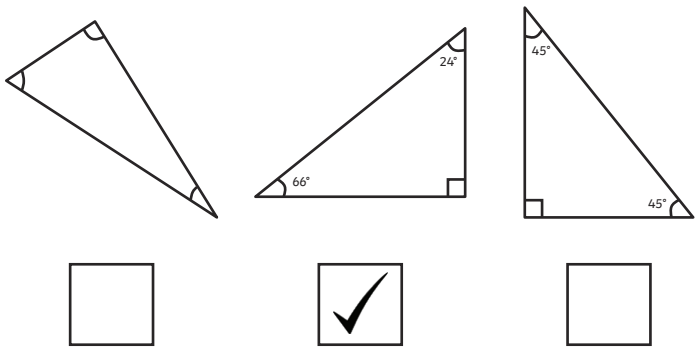
1. Ellie has measured the three angles in a triangle. One angle is 61° and another is 77°. What is the measurement of the third angle?

   42°

2. Jake, Omar and Saskija are playing a game. Jake and Omar must give Saskija clues to help her find the triangle that matches theirs.

   Which triangle should Saskija choose?





3. Dara is trying to solve a riddle. Her only clue is that the ratio of the three angles in the mystery triangle is 2:3:4. Calculate the size of the angles and write them below from smallest to largest:

40° _____ **60°** _____ **80°** _____

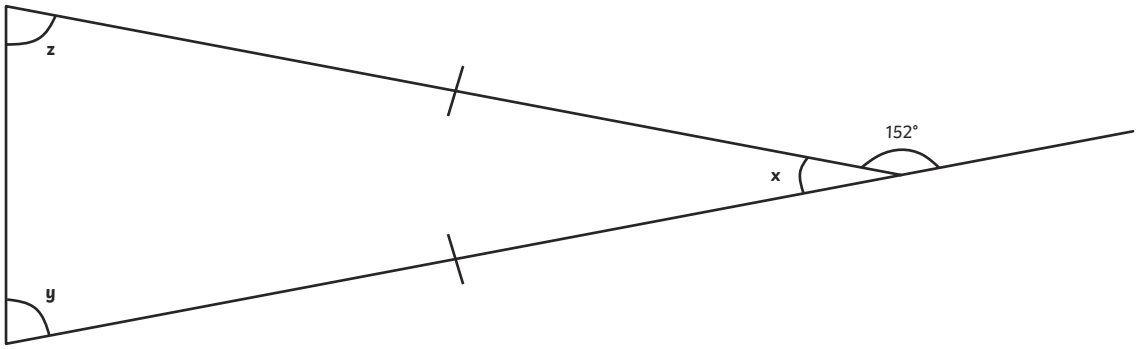
4. Shaali, Caitlyn and Aleisha are investigating scalene triangles. They have each been given a scalene triangle with one 52° angle labelled for them and two missing angles that they must measure.

My missing angles are 32° and 96°.	My missing angles are 27° and 120°.	My missing angles are 28° and 100°.
Shaali	**Caitlyn**	**Aleisha**

   One of them has made a mistake. Who was it?

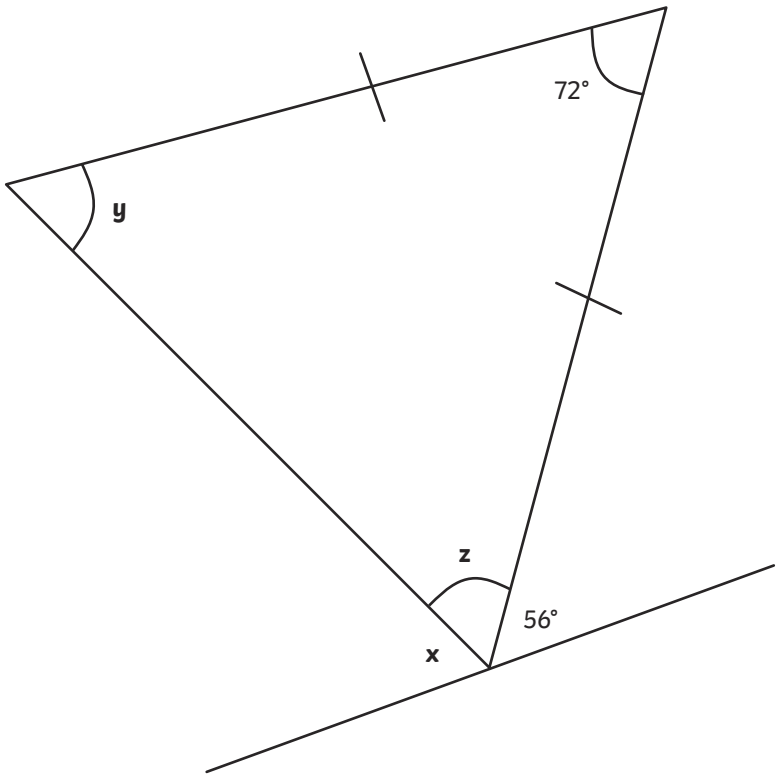
   Caitlyn has made a mistake. (Her angles add up to more than 180°.)

5. Find the size of all of the angles in the triangle.



x= **28°** y= **76°** z= **76°**

6. Calculate the missing angles.



x= **70°** ° y= **54°** ° z= **54°** °