1) Record the exact size of the angles by reading the protractor accurately. Remember to check that you are reading from the correct scale.

53°

75°

127°

104°

2) Estimate these angles and then measure them accurately using a protractor.

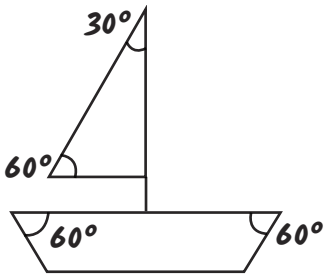
86°

130°

198°

265°

1) Can you identify all the acute angles in this picture? Use an arc, estimate each angle and then measure accurately using a protractor.



2) Mo says, 'I have measured this angle and it is 120°.' Do you agree with Mo? Explain your answer.

Mo is wrong. The angle is smaller than a right angle and therefore cannot be 120°. It is in fact 60°. Mo has taken his measurements from the wrong scale on the protractor.

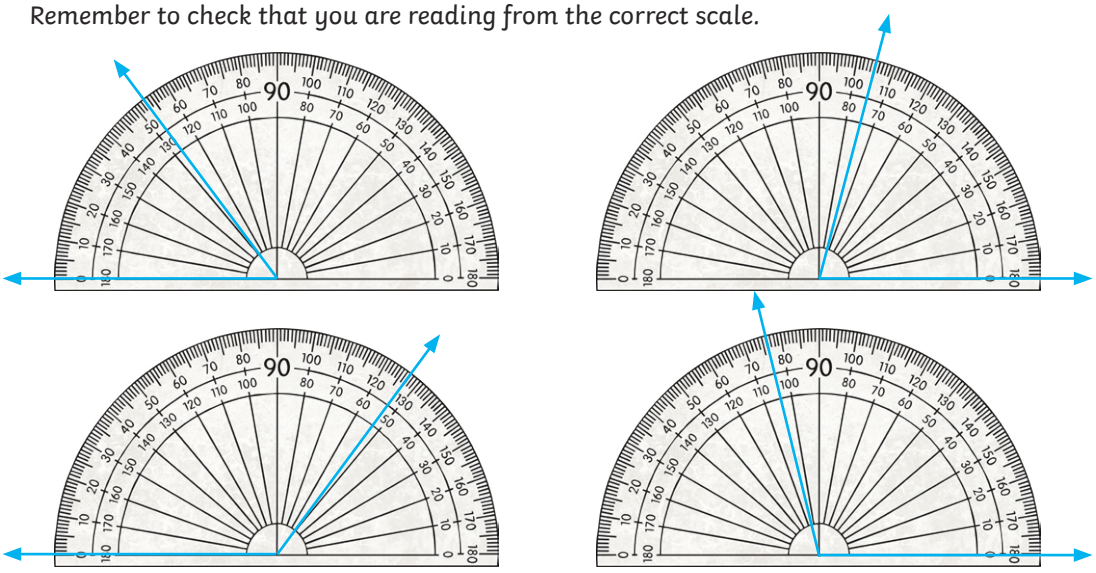
1) Here is one vertex of a scalene triangle. Measure this accurately. What could the measurements of the other two vertices be? Give three different answers.

The angles could be any measurement so long as the sum of the three angles is 180° and all angles are different sizes. For example, 35° (given), 65°and 80°.

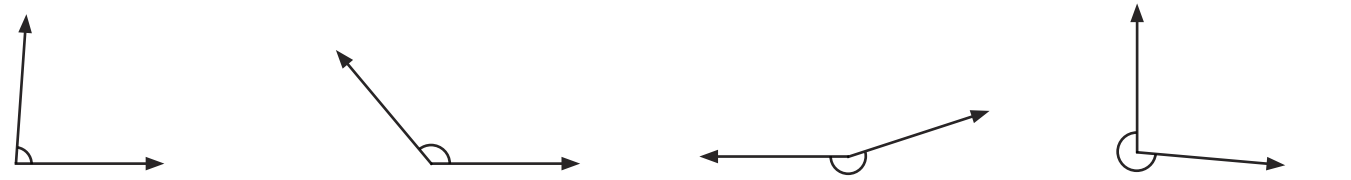
2) One vertex of an isosceles triangle is 40°. What could the other two measure? Are there any other possibilities? Explain your answer.

The sum of the three angles must be 180°. The other two angles could be 70° each or one at 40° and the other 100°.

1) Record the exact size of the angles by reading the protractor accurately.
Remember to check that you are reading from the correct scale.



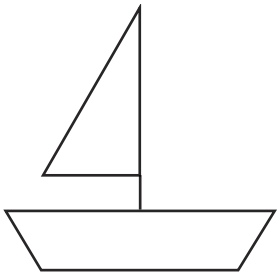
2) Estimate these angles and then measure them accurately using a protractor.



Estimate _____ Estimate _____ Estimate _____ Estimate _____

Measurement _____ Measurement _____ Measurement _____ Measurement _____

1) Can you identify all the acute angles in this picture? Use an arc, estimate each angle and then measure accurately using a protractor.



2) Mo says, 'I have measured this angle and it is 120°.' Do you agree with Mo? Explain your answer.

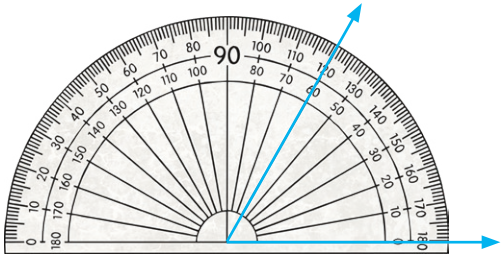
_____

_____

_____

_____

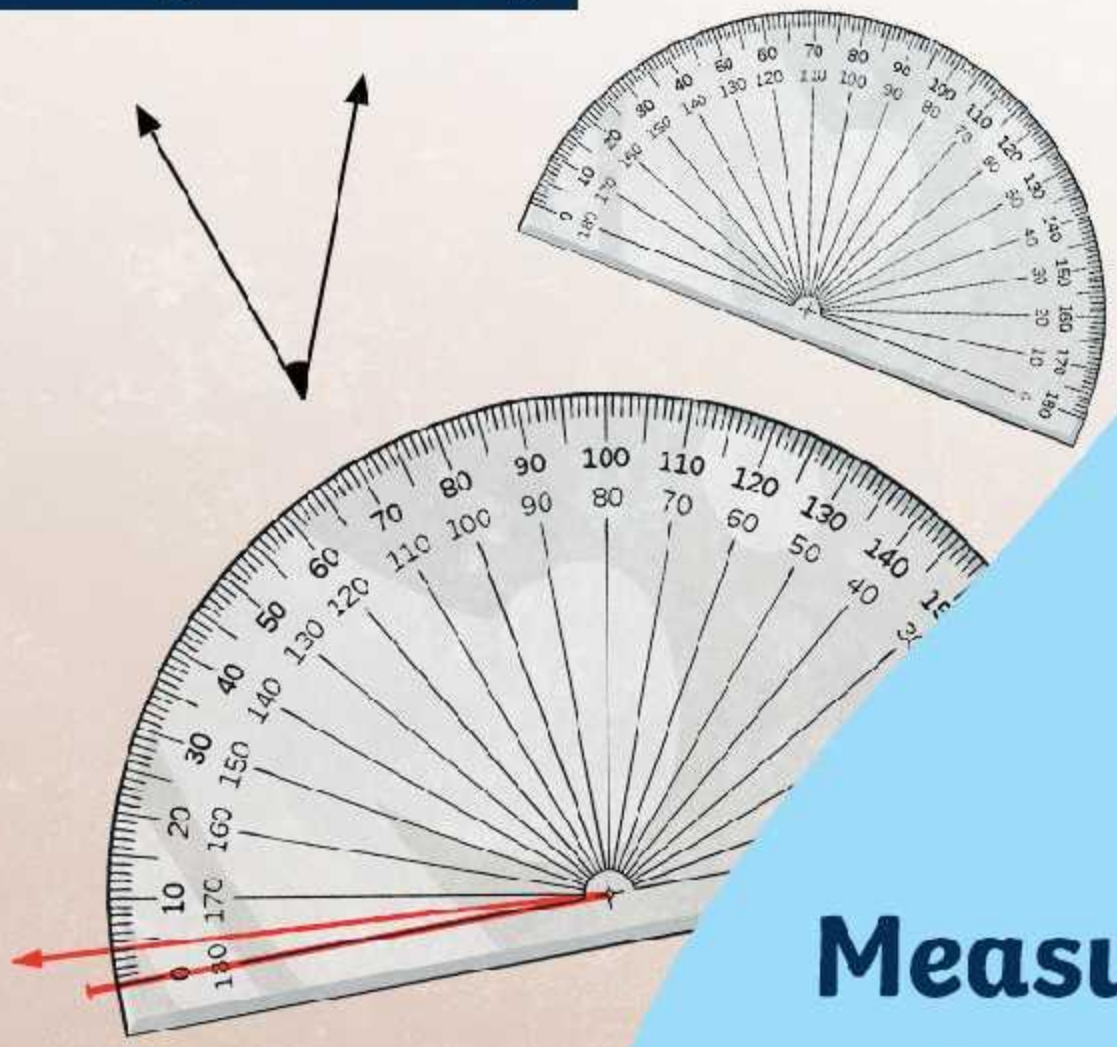
_____



1) Here is one vertex of a scalene triangle. Measure this accurately. What could the measurements of the other two vertices be? Give three different answers.

2) One vertex of an isosceles triangle measures 40°. What could the other two measure? Are there any other possibilities?
Explain your answer.

Diving into Mastery



Measuring with a Protractor (1)

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

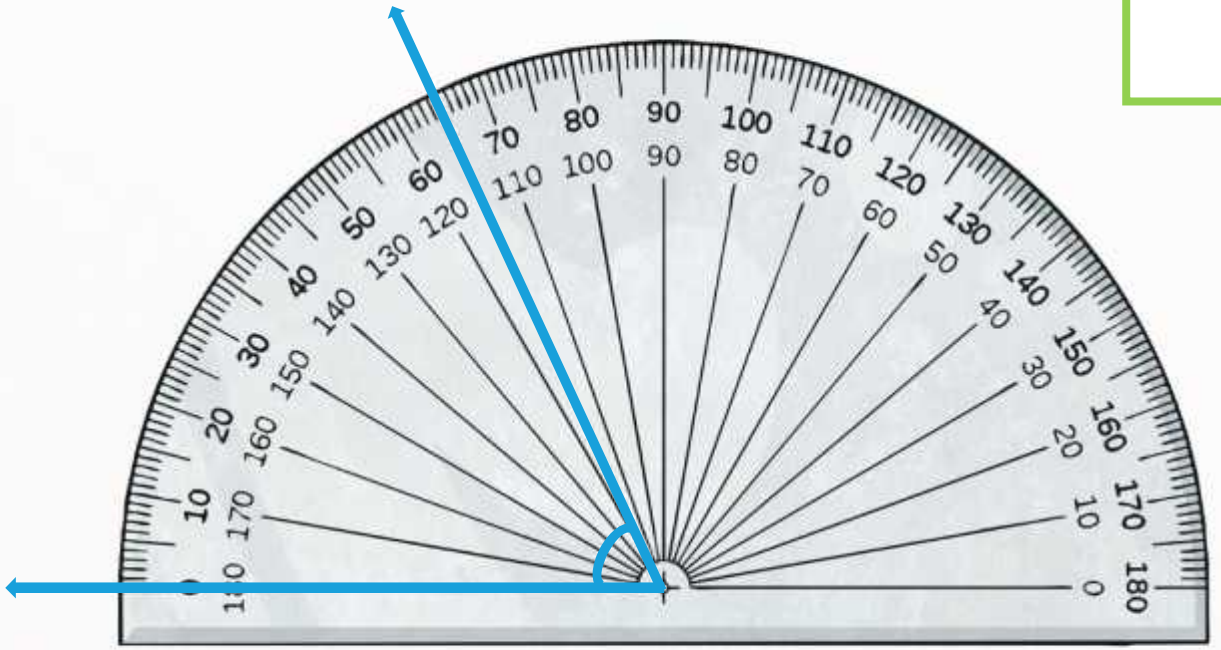
These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

National Curriculum Objective

- Draw given angles and measure them in degrees.

Measuring with a Protractor (1) | Diving

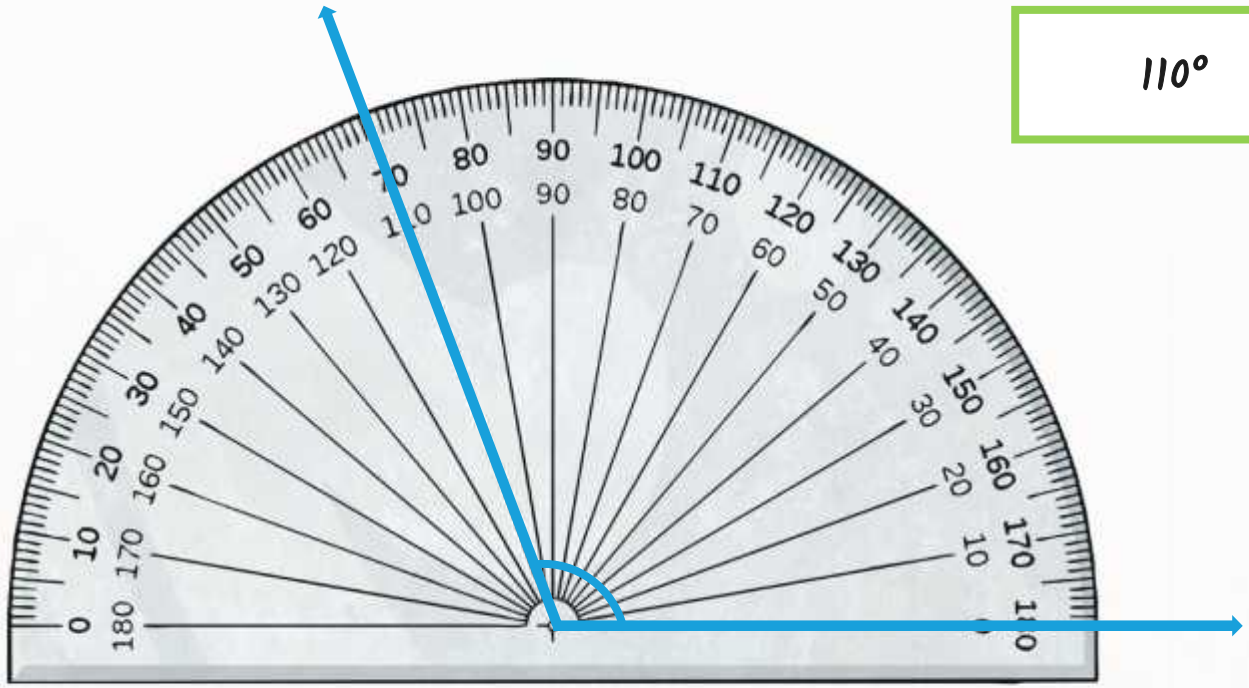
Record the exact size of the angles by reading the protractor accurately. Remember to check that you are reading from the correct scale.



65°

Measuring with a Protractor (1) | Diving

Record the exact size of the angles by reading the protractor accurately. Remember to check that you are reading from the correct scale.

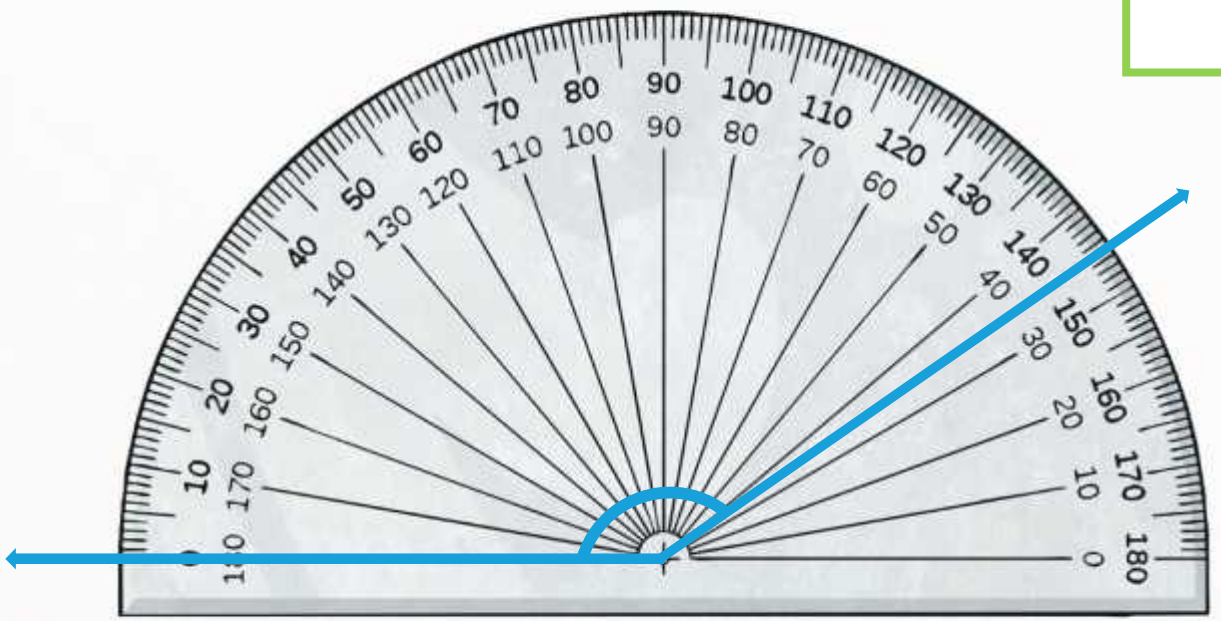


110°

Measuring with a Protractor (1) | Diving

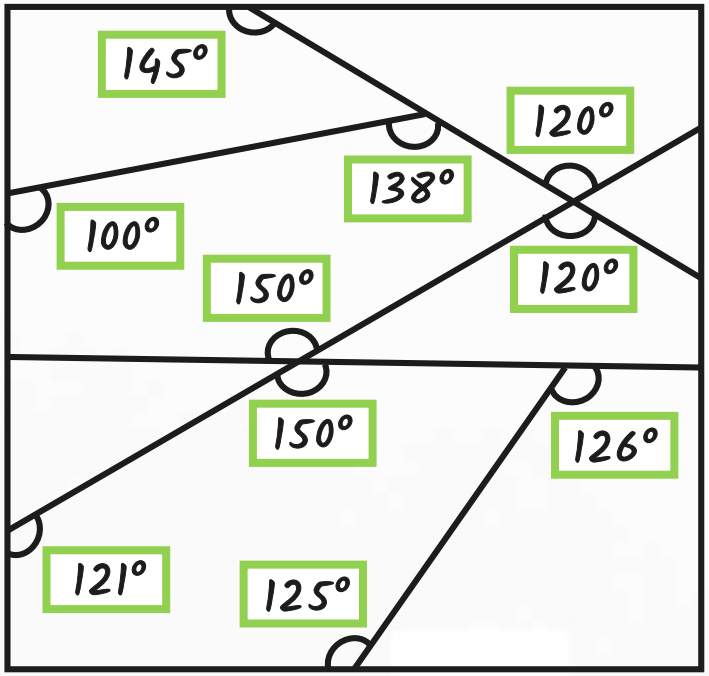
Record the exact size of the angles by reading the protractor accurately. Remember to check that you are reading from the correct scale.

145°



Measuring with a Protractor (1) | Deeper

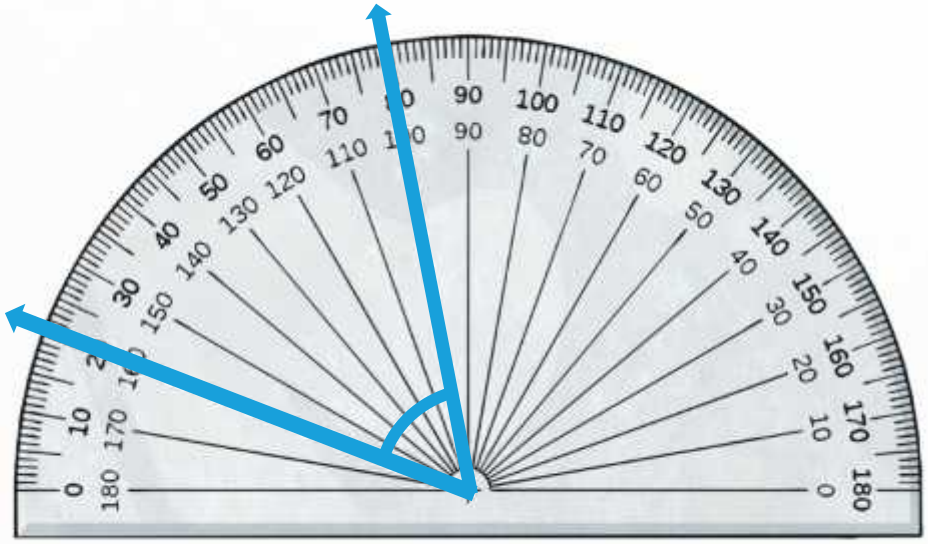
Can you identify all the obtuse angles in this picture? What would you estimate these angles to be? How will you measure them accurately using a protractor?



Measuring with a Protractor (1) | Deeper

Ahmed says,

I have measured this angle and it is 100°.



Do you agree with Ahmed? Explain your answer.

Ahmed has not used the protractor correctly. One of the lines of the angle needs to be on the zero line.

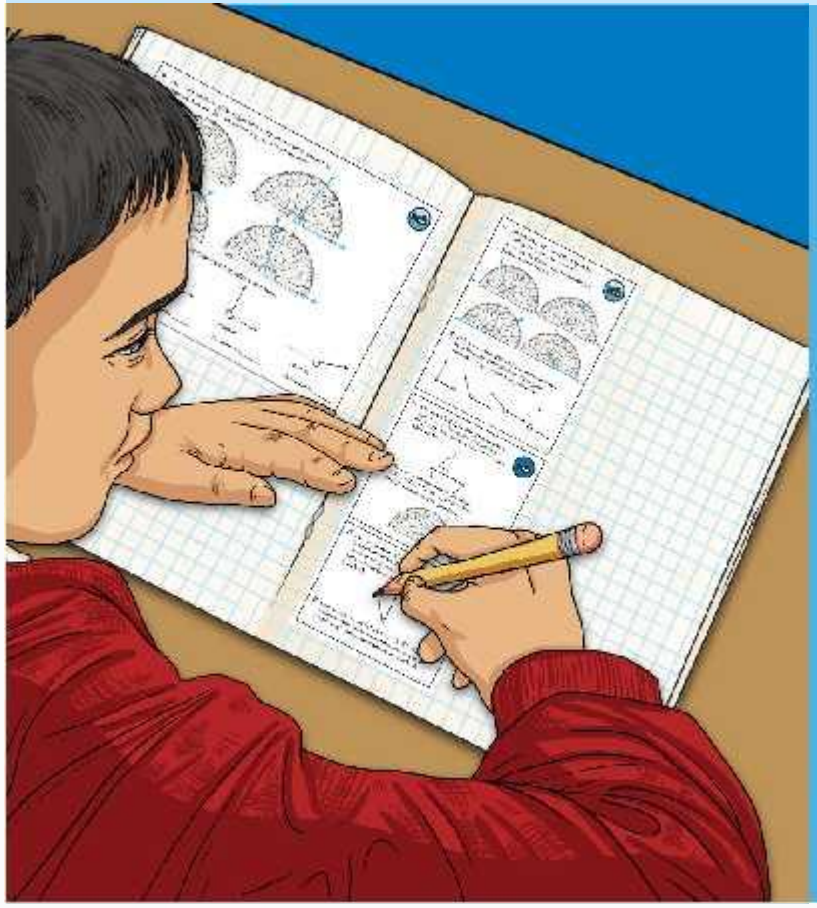
Measuring with a Protractor (1) | Deepest

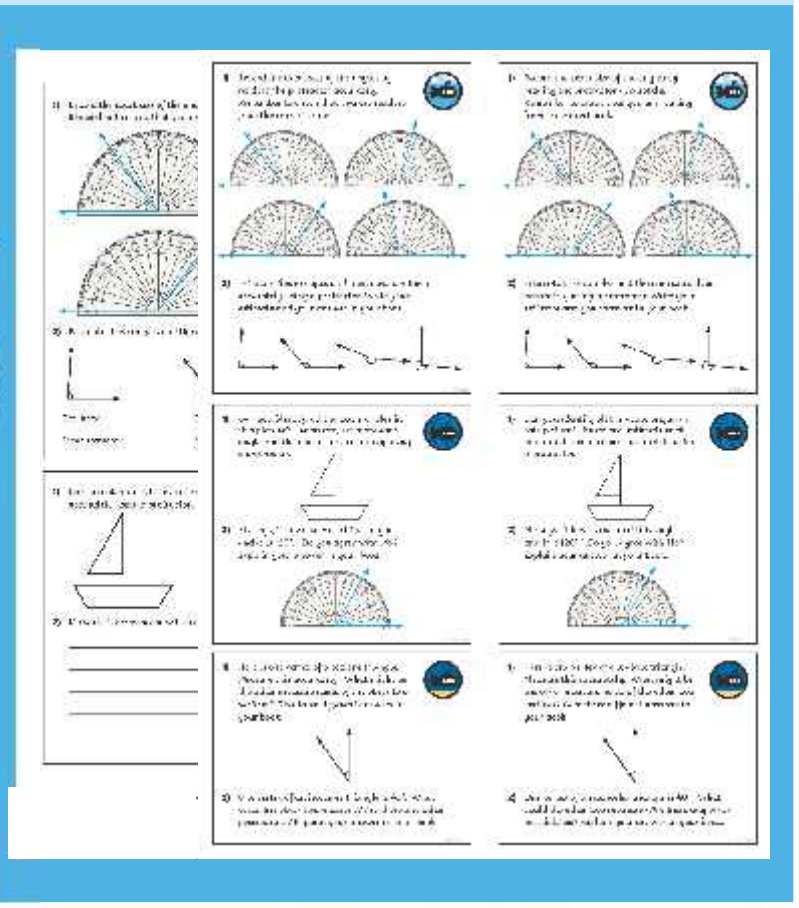
What could the vertices of this scalene triangle measure?

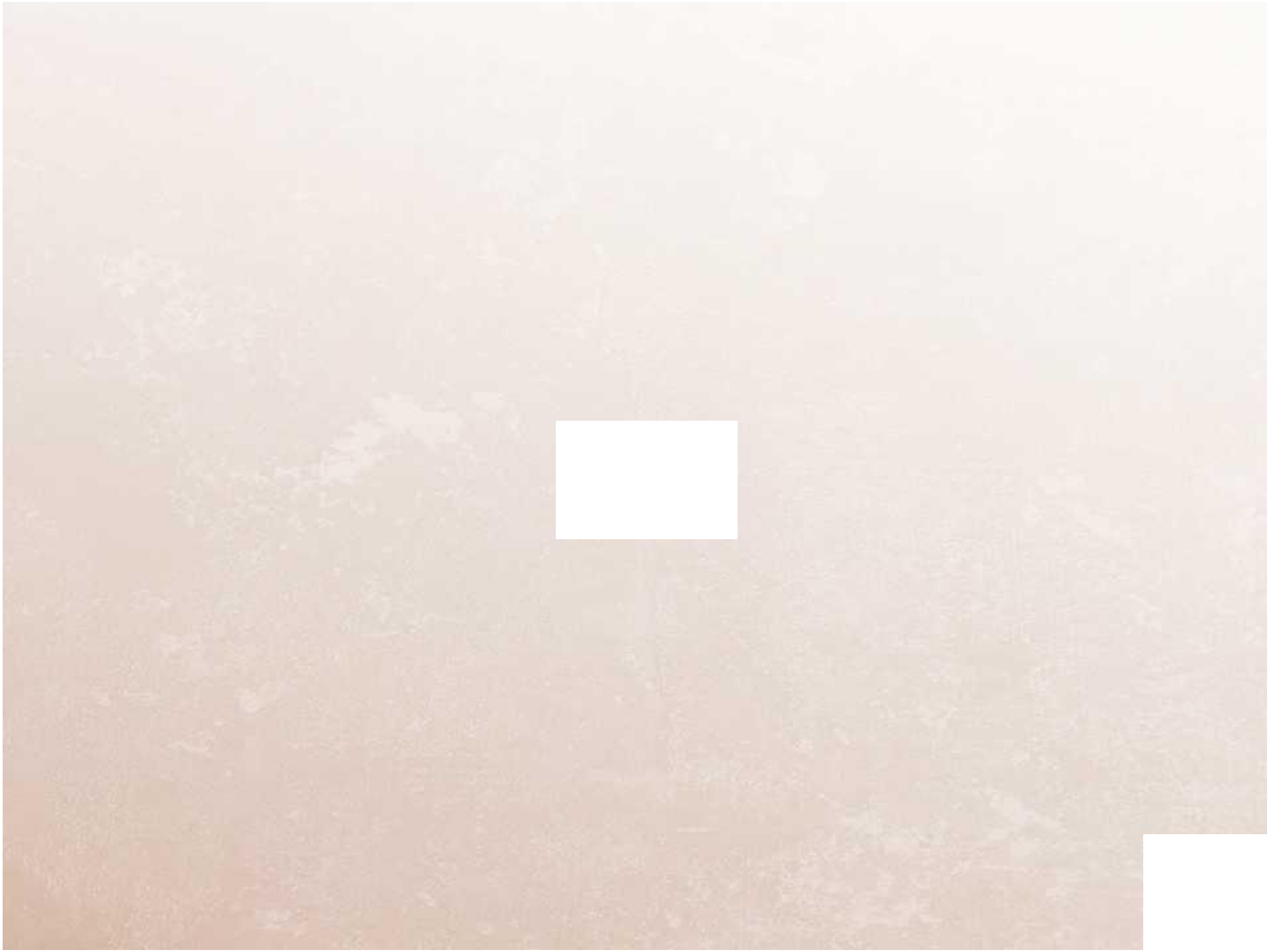
There are many possible answers. However, the sum of the angles must be 180 degrees and each angle must be different in size.

Measuring with a Protractor (1)

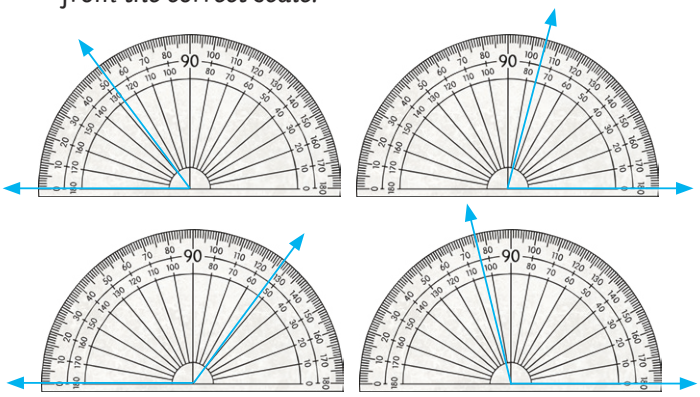
Dive in by completing your own activity!



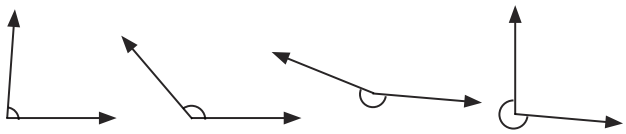




1) Record the exact size of the angles by reading the protractor accurately. Remember to check that you are reading from the correct scale.



2) Estimate these angles and then measure them accurately using a protractor. Write your estimate and your answer in your book.



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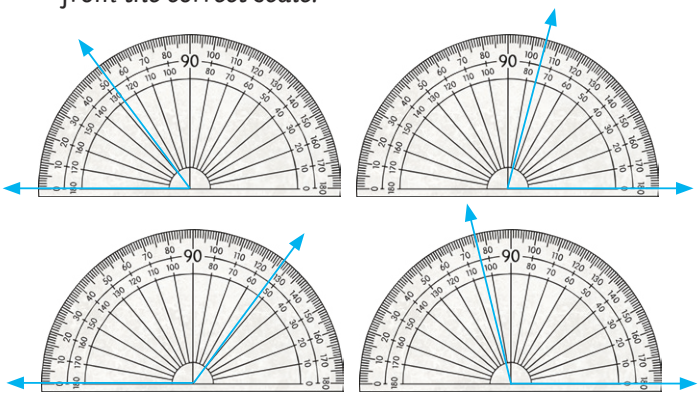

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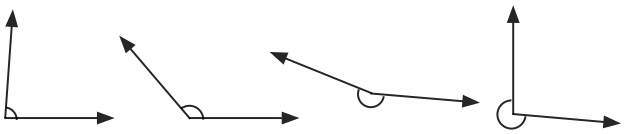
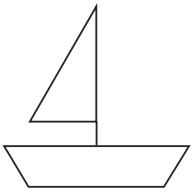
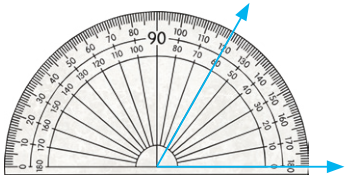


1) Can you identify all the acute angles in this picture? Use an arc, estimate each angle and then measure accurately using a protractor.



2) Mo says, 'I have measured this angle and it is 120°.' Do you agree with Mo? Explain your answer in your book.



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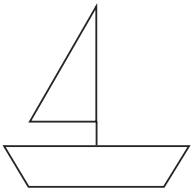

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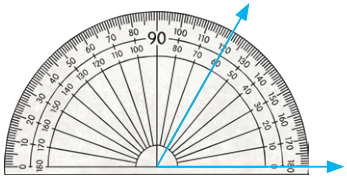

1) Here is one vertex of a scalene triangle. Measure this accurately. What could the measurements of the other two vertices be? Give three different answers in your book.

2) One vertex of an isosceles triangle measures 40°. What could the other two measure? Are there any other possibilities? Explain your answer in your book.

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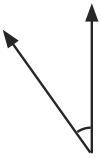

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