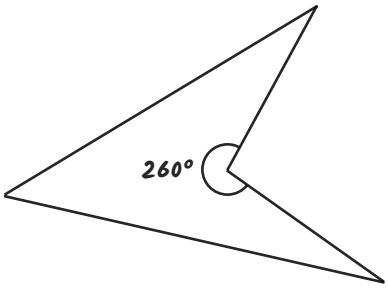
**1)** Swap books with your Learning Partner. With a ruler, draw three different angles in your partner's book. Now, swap back. Estimate the size of each angle. What properties of angles knowledge have you used to help you?
Now, measure accurately with a protractor to see how close your estimate was. Whose estimates were closest?
***Teacher to check estimates and accurate measuring.***

**2)** Marta measures the angle and says it's 135°. Explain her error.
***Marta has read the scale on the protractor incorrectly. If she had used her angles properties knowledge, Marta would have recognised that the angle is smaller than a right angle and therefore smaller than her measurement.***

**1)** Using a semi-circular protractor and a ruler, draw an angle of 310°. Is there more than one way to do this? Which method do you prefer and why?
***Some children might think about a whole turn and measure and draw the smaller angle, which in this case is one of 50°. They would then need to put the angle arc in the correct place showing the reflex angle.***
***Other children may draw a straight line which would be an angle of 180 degrees and then at the end of the line measure and draw the remaining part of the angle of 130°.***
***Both are good strategies.***

**2)** Sarah says she has drawn a quadrilateral and one of the angles is 260°. Paulo says that it's impossible. Who is correct? Prove it!
***Sarah is correct. This would produce a concave quadrilateral.***




**1)** Look at these statements. Are they always, sometimes or never true? Remember to explain and prove your answer.
***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.

a) Two acute angles make an obtuse angle.
***Sometimes true. The largest possible combination of two acute angles of 89° is 178° which is obtuse. However, adding angles of 30° and 40° would make an acute angle.***

b) Four obtuse angles can be used to make a whole turn.
***Never true. An obtuse angle is more than 90° but less than 180°. 91 x 4 = 364. This is greater than a whole turn.***

c) The sum of the interior angles of a triangle is 180°.
***Always true.***