

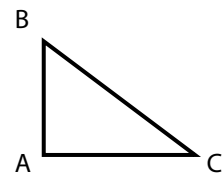
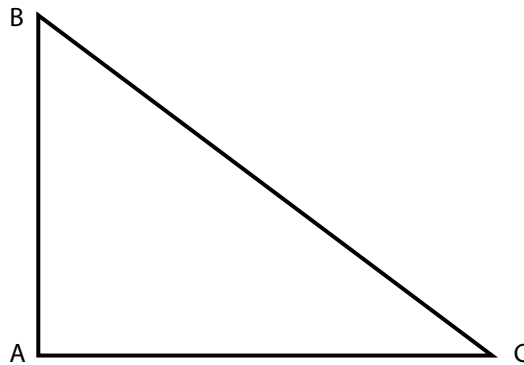
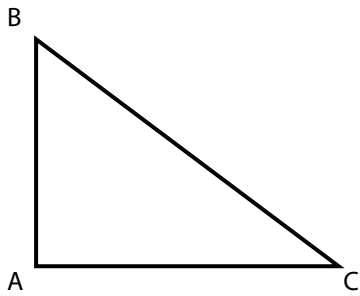
Mathematics Department Workshops

Topic: Trigonometry

Resource Sheet HT2.TRG.1

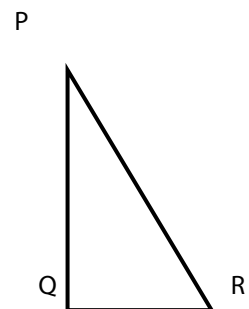
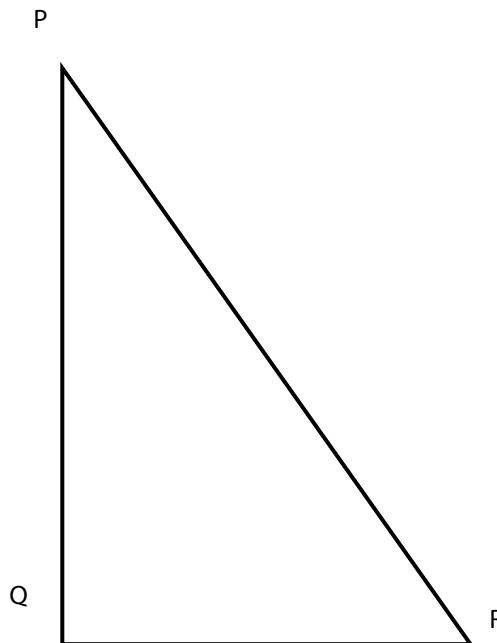
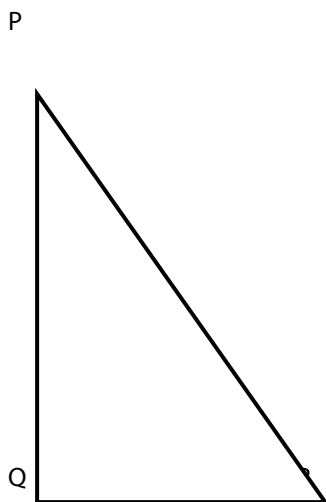
Investigating the trig ratios

Measure the sides and angles in each of these triangles.



What do you notice? What will happen when you work out $AB \div BC$ for each triangle? Why? Check your ideas by calculating $AB \div BC$ for each triangle.

Will the same happen when you calculate $AB \div AC$ and $AC \div BC$? Check! Why does this happen?



Do the same thing for the ratios of pairs of sides in these 3 similar triangles PQR.

What do you notice about these in comparison with the first set of triangles?

If you had another set of 3 similar triangles (XYZ) which also had a right angle, but are different from both of these, what would you expect to see about the ratios of pairs of sides in the triangles XYZ? Can you justify why this would be? Is there anything you can say about the ratios in XYZ compared with in ABC or in PQR?