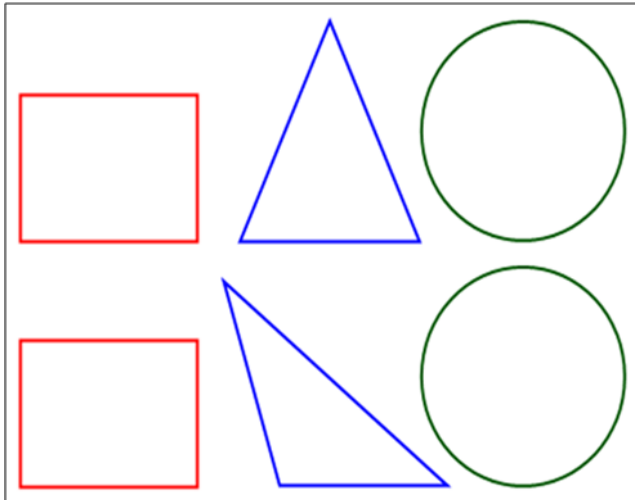


The areas of a rectangle, a triangle and a circle are equal.



The prompt can be presented in words only, which can lead to a discussion of types of possible triangles, or combined with one of the two sets of shapes on the left

While this seems a rather simple prompt, it can lead to a number of difficult questions for students in years 7 and 8.

How do you work out the area of an obtuse-angled triangle?

How do you work out the area of a circle?

Can the radius of the circle be a whole number if its area is a whole number?

Can the dimensions of the three shapes all be whole numbers or must there be decimals?

An issue that regularly arises is the degree of accuracy appropriate for the area of the circle in comparison to the areas of the rectangle and triangle. Is the statement proved correct if the area of the circle is within one tenth of a square centimetre of the other areas? ... or one half? Can the areas ever be exactly the same?

There are a number of related prompts that can be used on their own or in conjunction with the main prompt. All of the following have led to successful inquiries:

- (1) The areas of three different types of quadrilaterals are equal.
- (2) The perimeters of a rectangle, a triangle and a circle are equal.
- (3) The volume of a cuboid, a triangular prism and a cylinder are equal.