




Assess your learning - **The Circle**

Where is your learning at? <b>Be Honest!</b>	 red	 orange	 green	Revised for 10 Week	Revised for Summer
<b>Can you answer the following questions?</b>					
I can find the equation of a circle when given the centre and the radius. E.g. Find the equation of a circle with centre $(-2, 3)$ and radius 4.					
I can write down the centre and radius of a circle when given its equation. E.g. Write down the centre and radius of the circle $(x - 1)^2 + (y + 3)^2 = 25$ .					
I can find the general equation of a circle when given the centre and the radius. E.g. Find the equation of a circle with centre $(-1, 5)$ and radius 2. Write your answer in the form $x^2 + y^2 + 2gx + 2fy + c = 0$ .					
I can find the centre and radius of a circle when given the general equation. E.g. Find the centre and the radius of the circle with equation $x^2 + y^2 - 4x + 12y + 3 = 0$ .					
I can show whether a point is inside, on or outside a circle. E.g. Check if the point $(3, -4)$ is inside, on or outside the circle $(x - 1)^2 + (y + 3)^2 = 25$ .					
I can calculate the point of intersection(s) of a line and a circle. E.g. Find the point of intersection of $2x - y + 5 = 0$ and the circle $x^2 + y^2 - 2x - 6y + 8 = 0$ .					
I can prove that a line is a tangent to a circle.					
I can find the equation of a tangent when given the point of contact with a circle.					
I can find the equation of a tangent when given a point on the tangent not on the circle. E.g. Find the equations of two tangents from the point $(5, -3)$ to the circle $x^2 + y^2 - 4x + 8y + 12 = 0$ .					
I can show if two circles touch externally or internally. E.g. Prove that the circles $s: x^2 + y^2 - 16y + 32 = 0$ and $k: x^2 + y^2 - 18x + 2y + 32 = 0$ touch externally.					
I can find the point of contact between two touching circles. E.g. If the circles $s: x^2 + y^2 - 16y + 32 = 0$ and $k: x^2 + y^2 - 18x + 2y + 32 = 0$ touch externally, find their pt of contact.					
I can find the general equation of a circle when given three pieces of information. E.g. Find the equation of a circle that contains the points $A(0, 0)$ and $B(5, -1)$ and whose centre is on the line $x + y = 5$ .					