GRADE 12

Analytical Geometry

WEBSITE NOTES 2

TOPIC: The equation of a circle (any centre)

$$(x-a)^2+(y-b)^2=r^2$$

In Grade 11 you learnt:

1. Distance Formula
   $AB=\sqrt{(x_a-x_b)^2+(y_a-y_b)^2}$
2. Gradient between two points
   $mAB=\frac{y_a-y_b}{x_a-x_b}$
3. The MIDPOINT between two points
   Midpoint AB =$(\frac{x_a+x_b}{2};\ \frac{y_a+y_b}{2})$
4. m = tan A (where m is the gradient of a line and A is the angle of inclination)

Examples to try

Determine the equation of the circle with:

1. The centre is the origin and passing through the point (2;3)
2. The centre is (-2;4) and radius is 8.
3. Diameter CD where C = (1; -4) and D = (-3; 9).