

“Gift” Questions and how to “open” them

Common Wording	Main Topic Assessed
Find the equation of the tangent to the curve	Differentiation
Find the rate of change of the function.....	Differentiation
Find the gradient of the tangent to the curve at the point....	Differentiation
Show that the function is increasing / decreasing...	Differentiation
Find the stationary points of the curve $f(x) = \dots$	Differentiation
Show that $(x - a)$ is a factor of	Synthetic Division
.....makes an angle of x° with the positive direction of the x-axis	$m = \tan\theta$
Find the area between the curve.....	Integration
Rate of change (given), find the function.....	Integration
Find the equation of the tangent to the circle	Centre , $m(\text{rad})$; $m(\text{rad}) \times m(\text{tan}) = -1$
Perpendicular vectors	$u \cdot v = 0$
Find the point(s) of intersection of the line and curve/circle	Simultaneous equations (subs.)
If $\sin x = \dots$, find $\sin 2x / \cos 2x$, etc	Exact values
Show that (line) is a tangent to the curve / circle	Simultaneous equations (subs.)