

Name: _____

1. Find the tangent to the circle with equation $x^2 - 4x + y^2 = 165$ at the point $x = 7$.	
2. The equation $x^2 + kx + 4 = 0$ has one repeated real root. Find the possible values of k .	
3. Solve the equation $\log_2(x+3) - 2\log_2(x) = 4$. Give your answer to three significant figures.	
4. Prove that $(\tan \theta \sin \theta)^2 \equiv \tan^2 \theta - \sin^2 \theta$	