## AS Maths Key Skills Check 7

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 $(\tan\theta\sin\theta)^2 \equiv \tan^2\theta - \sin^2\theta$	

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