

28th May	
<p>A circle has equation $(x - 6)^2 + (y + 3)^2 = 9$</p> <p>State, with a reason, whether this circle intersects the y-axis</p>	<p>On y axis, $x = 0$</p> $6^2 + (y + 3)^2 = 9$ $(y + 3)^2 = -27$ <p>LHS ≥ 0</p> <p>so <u>no.</u></p>
<p>Solve</p> $x\sqrt{147} = 8\sqrt{3} + \sqrt{675}$	$7x\sqrt{3} = 8\sqrt{3} + 15\sqrt{3}$ $7x = 23$ $x = \frac{23}{7}$
<p>Simplify</p> $\frac{x+3}{x^9} \times \frac{x^7}{x+6} \div \frac{x^2}{4x^2+21x-24}$	$\frac{x+3}{x^9} \times \frac{x^7}{x+6} \times \frac{4x^2+21x-24}{x^2}$ $= \frac{(x+3)(4x^2+21x-24)}{x^4(x+6)}$
<p>Factorise $7x^2 - 22xy + 16y^2$</p>	$(7x-8y)(x-2y)$
<p>The gradient of the curve C is given by</p> $\frac{dy}{dx} = (2x - 3)^2$ <p>Mark says that the tangent at the point A on the curve C is parallel to the line $y = 7 - 2x$</p>	<p>Explain why Mark is incorrect.</p> $(2x - 3)^2 = -2$ <p>LHS ≥ 0 so no solution.</p>