King Fahd University of Petroleum & Minerals Department of Math & Stat Math-202, Section # 2 QUIZ NO.1

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1) Given that
$$\left(x^2 - 9\right) \frac{dy}{dx} = -xy$$
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a) Re-write the D.E in standard form

b) Find the integrating factor.

c) Solve the D.E.

2) Solve the differential equation
$$2xy \frac{dy}{dx} = 4x^2 + 3y^2$$

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3) Solve
$$(6xy - y^3)dx + (4y + 3x^2 - 3xy^2)dy = 0$$

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