6 Solve the equation $\left|x^2 - 5x\right| = 6$. [5]

7 **(a)** Differentiate $\dfrac{\sin x + \cos x}{e^{1-3x}}$ with respect to x. [4]

(b) Find $\int \left(1 + \tan^2 3x\right) dx$. [3]

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8 Solve the simultaneous equations $\frac{x}{2y} - \frac{4y}{x} = -1$ and $x = 1 - 6y$. [5]

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