Let $A = \begin{bmatrix} 3e^{2t} & 2e^{4t} \\ 4e^{2t} & -3e^{4t} \end{bmatrix}$.

(a) Find the determinant of A.

$\det(A) = \boxed{}$

(b) Find the matrix of cofactors of A.

$C = \begin{bmatrix} \boxed{} & \boxed{} \\ \boxed{} & \boxed{} \end{bmatrix}$

(c) Find the adjugate of A.

$\text{adj}(A) = \begin{bmatrix} \boxed{} & \boxed{} \\ \boxed{} & \boxed{} \end{bmatrix}$

(d) Find the inverse of A.

$A^{-1} = \begin{bmatrix} \boxed{} & \boxed{} \\ \boxed{} & \boxed{} \end{bmatrix}$

Let $A = \begin{bmatrix} 3e^{2t} & 2e^{4t} \\ 4e^{2t} & -3e^{4t} \end{bmatrix}$.

(a) Find the determinant of A.

$\det(A) = \boxed{-17e^{6t}}$

(b) Find the matrix of cofactors of A.

$C = \begin{bmatrix} \boxed{-3e^{4t}} & \boxed{-4e^{2t}} \\ \boxed{-2e^{4t}} & \boxed{3e^{2t}} \end{bmatrix}$

(c) Find the adjugate of A.

$\mathrm{adj}(A) = \begin{bmatrix} \boxed{-3e^{4t}} & \boxed{-2e^{4t}} \\ \boxed{-4e^{2t}} & \boxed{3e^{2t}} \end{bmatrix}$

(d) Find the inverse of A.

$A^{-1} = \begin{bmatrix} \boxed{3e^{-2t}/17} & \boxed{2e^{-2t}/17} \\ \boxed{4e^{-4t}/17} & \boxed{3e^{-4t}/17} \end{bmatrix}$