4.2.3 $z(t) = \alpha \begin{pmatrix} 2 \\ 5 \end{pmatrix} e^{t} + \beta \begin{pmatrix} 2 \\ 1 \end{pmatrix} e^{-3t}$

4.2.4 $z(t) = \alpha \begin{pmatrix} 3 \\ 1 \end{pmatrix} e^{7t/2} + \beta \begin{pmatrix} -6 \\ 1 \end{pmatrix} e^{-t}$

4.2.5 $z(t) = \alpha \begin{pmatrix} 5 \\ 2 \end{pmatrix} e^{8t} + \beta \begin{pmatrix} 1 \\ 4 \end{pmatrix} e^{-10t}$

4.2.6 $z(t) = \alpha \begin{pmatrix} 1 \\ 3 \end{pmatrix} + \beta \begin{pmatrix} 2 \\ 1 \end{pmatrix} e^{-5t}$

4.2.13 $z(t) = 2 \begin{pmatrix} 0 \\ 1 \end{pmatrix} e^{-t/2} + 3 \begin{pmatrix} 1 \\ 1 \end{pmatrix} e^{t/2}$

4.2.17 $z(t) = \alpha \begin{pmatrix} 1 \\ 3 \end{pmatrix} + \beta \left[\begin{pmatrix} 1 \\ 3 \end{pmatrix} t + \begin{pmatrix} 1 \\ 2 \end{pmatrix} \right]$

4.2.18 $z(t) = \alpha \begin{pmatrix} 1 \\ 1 \end{pmatrix} e^{-t} + \beta \left[\begin{pmatrix} 1 \\ 1 \end{pmatrix} t e^{-t} + \begin{pmatrix} 0 \\ 1/5 \end{pmatrix} e^{-t} \right]$

4.2.19 $z(t) = \alpha \begin{pmatrix} 1 \\ 1 \end{pmatrix} e^{2t} + \beta \left[\begin{pmatrix} 1 \\ 1 \end{pmatrix} t e^{2t} + \begin{pmatrix} -1/3 \\ 0 \end{pmatrix} e^{2t} \right]$

4.2.33 $z(t) = \alpha \begin{pmatrix} \sin t - \cos t \\ 2 \cos t \end{pmatrix} e^{4t} + \beta \begin{pmatrix} -\sin t - \cos t \\ 2 \sin t \end{pmatrix} e^{4t}$

4.2.34 $z(t) = \alpha \begin{pmatrix} \cos(3t) + 3\sin(3t) \\ 2\cos(3t) \end{pmatrix} e^{5t} + \beta \begin{pmatrix} \sin(3t) - 3\cos(3t) \\ 2\cos(3t) \end{pmatrix} e^{5t}$

4.2.35 $z(t) = \alpha \begin{pmatrix} 4\cos(3t) - 3\sin(3t) \\ 5\cos(3t) \end{pmatrix} + \beta \begin{pmatrix} 4\sin(3t) + 3\cos(3t) \\ 5\sin(3t) \end{pmatrix}$

4.2.36 $z(t) = \alpha \begin{pmatrix} 2\cos(2t) - 2\sin(2t) \\ \cos(2t) \end{pmatrix} e^{-t} + \beta \begin{pmatrix} 2\cos(2t) + 2\sin(2t) \\ \sin(2t) \end{pmatrix} e^{-t}$

4.3.1 $z(t) = \alpha \begin{pmatrix} 1 \\ 1 \end{pmatrix} + \beta \begin{pmatrix} 3 \\ 2 \end{pmatrix} e^{t} - \begin{pmatrix} 11 \\ 11 \end{pmatrix} t - \begin{pmatrix} 15 \\ 10 \end{pmatrix}$

4.3.2 $z(t) = \alpha \begin{pmatrix} 1 \\ 1 \end{pmatrix} e^{t} + \beta \begin{pmatrix} 1 \\ 3 \end{pmatrix} e^{-t} + \begin{pmatrix} 4 \\ 8 \end{pmatrix} t - \begin{pmatrix} 0 \\ 4 \end{pmatrix}$

4.3.3 $z(t) = \alpha \begin{pmatrix} 10 \\ 3 \end{pmatrix} e^{3t/2} + \beta \begin{pmatrix} 2 \\ 1 \end{pmatrix} e^{t/2} - \begin{pmatrix} 13/2 \\ 13/4 \end{pmatrix} t e^{t/2} - \begin{pmatrix} 15/2 \\ 9/4 \end{pmatrix} e^{t/2}$