

U GCG **Pole Waveforms** 1

12

× 1st pole
× 2nd pole

U GCG **Laplace Transform** 1

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$$\frac{A}{s+a} \xrightarrow{\mathcal{L}^{-1}} Ae^{-at} u t$$

$$\frac{B\omega}{s+a + \omega} \xrightarrow{\mathcal{L}^{-1}} Be^{-at} \omega t u t$$

$$\frac{A s+a}{s+a + \omega} \xrightarrow{\mathcal{L}^{-1}} Ae^{-at} \omega t u t$$

U GCG **Two Real Poles** 1

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$$\frac{Ds+E}{s+a s+b} = \frac{A}{s+a} + \frac{B}{s+b}$$

$$A = \frac{-Da+E}{b-a}, \quad B = \frac{-Db+E}{a-b}$$

U GCG **Resistor** 1

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U GCG **Double Pole** 2

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$$\frac{Ds+E}{s+a} = \frac{A}{s+a} + \frac{B}{s+a}$$

$$A = -Da+E, \quad B = D$$

U GCG **Capacitor** 2

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U GCG **Conjugate Poles** 3

12

$$\frac{Ds+E}{s+a + \omega} = \frac{A s+a}{s+a + \omega} + \frac{B\omega}{s+a + \omega}$$

$$A = D, \quad B = \frac{E-aD}{\omega}$$

U GCG **Inductor** 3

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