

$$37. \mathcal{L}\{(t-1)\mathcal{U}(t-1)\}$$

$$39. \mathcal{L}\{t\mathcal{U}(t-2)\}$$

$$41. \mathcal{L}\{\cos 2t \mathcal{U}(t-\pi)\}$$

$$43. \mathcal{L}^{-1}\left\{\frac{e^{-2s}}{s^3}\right\}$$

$$45. \mathcal{L}^{-1}\left\{\frac{e^{-\pi s}}{s^2+1}\right\}$$

$$47. \mathcal{L}^{-1}\left\{\frac{e^{-s}}{s(s+1)}\right\}$$

$$38. \mathcal{L}\{e^{2-t}\mathcal{U}(t-2)\}$$

$$40. \mathcal{L}\{(3t+1)\mathcal{U}(t-1)\}$$

$$42. \mathcal{L}\{\sin t \mathcal{U}(t-\pi/2)\}$$

$$44. \mathcal{L}^{-1}\left\{\frac{(1+e^{-2s})^2}{s+2}\right\}$$

$$46. \mathcal{L}^{-1}\left\{\frac{se^{-\pi s/2}}{s^2+4}\right\}$$

$$48. \mathcal{L}^{-1}\left\{\frac{e^{-2s}}{s^2(s-1)}\right\}$$