

ANTON REVIEW

55–74 Evaluate the integral.

55. $\int \frac{dx}{(3+x^2)^{3/2}}$

57. $\int_0^{\pi/4} \tan^7 \theta \, d\theta$

59. $\int \sin^2 2x \cos^3 2x \, dx$

61. $\int e^{2x} \cos 3x \, dx$

63. $\int \frac{dx}{(x-1)(x+2)(x-3)}$

65. $\int_4^8 \frac{\sqrt{x-4}}{x} \, dx$

67. $\int \frac{1}{\sqrt{e^x+1}} \, dx$

69. $\int_0^{1/2} \sin^{-1} x \, dx$

71. $\int \frac{x+3}{\sqrt{x^2+2x+2}} \, dx$

73. $\int_a^{+\infty} \frac{x}{(x^2+1)^2} \, dx$

56. $\int x \cos 3x \, dx$

58. $\int \frac{\cos \theta}{\sin^2 \theta - 6 \sin \theta + 12} \, d\theta$

60. $\int_0^4 \frac{1}{(x-3)^2} \, dx$

62. $\int_{-1/\sqrt{2}}^{1/\sqrt{2}} (1-2x^2)^{3/2} \, dx$

64. $\int_0^{1/3} \frac{dx}{(4-9x^2)^2}$

66. $\int_0^{\ln 2} \sqrt{e^x-1} \, dx$

68. $\int \frac{dx}{x(x^2+x+1)}$

70. $\int \tan^5 4x \sec^4 4x \, dx$

72. $\int \frac{\sec^2 \theta}{\tan^3 \theta - \tan^2 \theta} \, d\theta$