

# Quadratic Expressions Integrals Worksheet

For problems 1 - 18, evaluate the integral using the appropriate method.

$$1. \int \frac{1}{(x+1)^2 + 4} dx$$

$$2. \int \frac{1}{\sqrt{16 - (x-3)^2}} dx$$

$$3. \int \frac{1}{x^2 - 4x + 8} dx$$

$$4. \int \frac{1}{x^2 - 2x + 2} dx$$

$$5. \int \frac{1}{\sqrt{4x - x^2}} dx$$

$$6. \int \frac{1}{\sqrt{7 + 6x - x^2}} dx$$

$$7. \int \frac{2x + 3}{\sqrt{9 - 8x - x^2}} dx$$

$$8. \int \frac{x + 5}{9x^2 + 6x + 17} dx$$

$$9. \int \frac{1}{(x^2 + 4x + 5)^2} dx$$

$$10. \int \frac{1}{(x^2 - 6x + 34)^{\frac{3}{2}}} dx$$

$$11. \int \frac{1}{(x^2 + 6x + 13)^{\frac{3}{2}}} dx$$

$$12. \int \sqrt{x(6-x)} dx$$

$$13. \int \frac{1}{2x^2 - 3x + 9} dx$$

$$14. \int \frac{2x}{(x^2 + 2x + 5)^2} dx$$

$$15. \int \frac{e^x}{e^{2x} + 3e^x + 2} dx$$

$$16. \int \sqrt{x^2 + 10x} dx$$

$$17. \int_2^3 \frac{x^2 - 4x + 6}{x^2 - 4x + 5} dx$$

$$18. \int_0^1 \frac{x-1}{x^2 + x + 1} dx$$