Name : _____ Score : _____

Teacher : _____ Date : _____

# Substitution in Indefinite Integrals

**Find each indefinite integral using the substitution provided.**

1) $\int \frac{10x + 5}{(x^2 + x - 6)^3}$ ; $u = x^2 + x - 6$

2) $\int \frac{3}{(-x + 2)^2}$ ; $u = -x + 2$

3) $\int \frac{-2}{(-x - 3)^4}$ ; $u = -x - 3$

4) $\int \frac{6x - 15}{(x^2 - 5x + 6)^4}$ ; $u = x^2 - 5x + 6$

5) $\int \frac{-2}{(x + 1)^4}$ ; $u = x + 1$

6) $\int \frac{8x - 20}{(-x^2 + 5x - 4)^4}$ ; $u = -x^2 + 5x - 4$

7) $\int \frac{-3}{(x + 5)^3}$ ; $u = x + 5$

8) $\int \frac{-4x - 6}{(x^2 + 3x - 10)^2}$ ; $u = x^2 + 3x - 10$

Name : _____ Score : _____

Teacher : _____ Date : _____

# Substitution in Indefinite Integrals

**Find each indefinite integral using the substitution provided.**

9) $\int \frac{-3}{(-x+5)^3}$ ; $u = -x + 5$

10) $\int \frac{-5}{(x+2)^2}$ ; $u = x + 2$

11) $\int \frac{10x+25}{(-x^2-5x-6)^2}$ ; $u = -x^2 - 5x - 6$

12) $\int \frac{-4}{(x+4)^2}$ ; $u = x + 4$

13) $\int \frac{8x+32}{(x^2+8x+15)^3}$ ; $u = x^2 + 8x + 15$

14) $\int \frac{10x+35}{(x^2+7x+12)^4}$ ; $u = x^2 + 7x + 12$

15) $\int \frac{4}{(x-3)^4}$ ; $u = x - 3$

16) $\int \frac{4x+6}{(x^2+3x-4)^3}$ ; $u = x^2 + 3x - 4$

Name : _____ Score : _____

Teacher : _____ Date : _____

# Substitution in Indefinite Integrals

**Find each indefinite integral using the substitution provided.**

1) $\int \frac{10x + 5}{(x^2 + x - 6)^3}$ ; $u = x^2 + x - 6$

$\int \frac{5}{u^3}\,du$

2) $\int \frac{3}{(-x + 2)^2}$ ; $u = -x + 2$

$\int \frac{-3}{u^2}\,du$

3) $\int \frac{-2}{(-x - 3)^4}$ ; $u = -x - 3$

$\int \frac{2}{u^4}\,du$

4) $\int \frac{6x - 15}{(x^2 - 5x + 6)^4}$ ; $u = x^2 - 5x + 6$

$\int \frac{3}{u^4}\,du$

5) $\int \frac{-2}{(x + 1)^4}$ ; $u = x + 1$

$\int \frac{-2}{u^4}\,du$

6) $\int \frac{8x - 20}{(-x^2 + 5x - 4)^4}$ ; $u = -x^2 + 5x - 4$

$\int \frac{-4}{u^4}\,du$

7) $\int \frac{-3}{(x + 5)^3}$ ; $u = x + 5$

$\int \frac{-3}{u^3}\,du$

8) $\int \frac{-4x - 6}{(x^2 + 3x - 10)^2}$ ; $u = x^2 + 3x - 10$

$\int \frac{-2}{u^2}\,du$

Name : _____ Score : _____

Teacher : _____ Date : _____

# Substitution in Indefinite Integrals

**Find each indefinite integral using the substitution provided.**

9) $\int \frac{-3}{(-x+5)^3}$ ; $u = -x + 5$

$\int \frac{3}{u^3}\,du$

10) $\int \frac{-5}{(x+2)^2}$ ; $u = x + 2$

$\int \frac{-5}{u^2}\,du$

11) $\int \frac{10x+25}{(-x^2-5x-6)^2}$ ; $u = -x^2 - 5x - 6$

$\int \frac{-5}{u^2}\,du$

12) $\int \frac{-4}{(x+4)^2}$ ; $u = x + 4$

$\int \frac{-4}{u^2}\,du$

13) $\int \frac{8x+32}{(x^2+8x+15)^3}$ ; $u = x^2 + 8x + 15$

$\int \frac{4}{u^3}\,du$

14) $\int \frac{10x+35}{(x^2+7x+12)^4}$ ; $u = x^2 + 7x + 12$

$\int \frac{5}{u^4}\,du$

15) $\int \frac{4}{(x-3)^4}$ ; $u = x - 3$

$\int \frac{4}{u^4}\,du$

16) $\int \frac{4x+6}{(x^2+3x-4)^3}$ ; $u = x^2 + 3x - 4$

$\int \frac{2}{u^3}\,du$