

Name : _____

Score : _____

Teacher : _____

Date : _____

Integration by Substitution

Find each indefinite integral using substitution.

1) $\int \left(\frac{-36}{\sec(-6x + 18)} \right) dx ; u = -6x + 18$

2) $\int (-(4)\tan(-4x + 8)) dx ; u = -4x + 8$

3) $\int \left(\frac{(20)}{\csc(-2x + 19)} \right) dx ; u = -2x + 19$

4) $\int ((-70)\cos(7x - 2)) dx ; u = 7x - 2$

5) $\int ((3)\cot(-x - 19)) dx ; u = -x - 19$



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Integration by Substitution

Find each indefinite integral using substitution.

1) $\int \left(\frac{-36}{\sec(-6x + 18)} \right) dx ; u = -6x + 18$

$6\sin(-6x + 18) + C$

2) $\int (-(4)\tan(-4x + 8)) dx ; u = -4x + 8$

$-\ln|\cos(-4x + 8)| + C$

3) $\int \left(\frac{(20)}{\csc(-2x + 19)} \right) dx ; u = -2x + 19$

$10\cos(-2x + 19) + C$

4) $\int ((-70)\cos(7x - 2)) dx ; u = 7x - 2$

$-10\sin(7x - 2) + C$

5) $\int ((3)\cot(-x - 19)) dx ; u = -x - 19$

$-3\ln|\sin(-x - 19)| + C$

