

Name : _____

Score : _____

Teacher : _____

Date : _____

Integration by Substitution

Find each indefinite integral.

1) $\int ((36x^2 + 21)e^{4x^3 + 7x})dx$

2) $\int ((24x^2 + 160x^4)e^{2x^3 + 8x^5})dx$

3) $\int ((-80x - 80x^3)e^{8x^2 + 4x^4})dx$

4) $\int ((10x^4 + 12)e^{x^5 + 6x})dx$

5) $\int ((25x^4 + 50x)e^{x^5 + 5x^2})dx$

6) $\int ((72x^3 + 20x^4)e^{9x^4 + 2x^5})dx$

7) $\int ((-135x^2 - 60x^3)e^{9x^3 + 3x^4})dx$

8) $\int ((256x^3 + 40x^4)e^{8x^4 + x^5})dx$



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Integration by Substitution

Find each indefinite integral.

9) $\int ((28x + 28x^3)e^{2x^2 + x^4})dx$

10) $\int ((150x^4 + 18)e^{5x^5 + 3x})dx$

11) $\int ((45x^4 + 30x)e^{3x^5 + 5x^2})dx$

12) $\int ((-56x - 32)e^{7x^2 + 8x})dx$

13) $\int ((-60x^2 - 64x)e^{5x^3 + 8x^2})dx$

14) $\int ((24x^3 + 7)e^{6x^4 + 7x})dx$

15) $\int ((60x^2 + 50x)e^{4x^3 + 5x^2})dx$

16) $\int ((-54x^2 - 70x^4)e^{9x^3 + 7x^5})dx$



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Integration by Substitution

Find each indefinite integral.

1) $\int ((36x^2 + 21)e^{4x^3 + 7x})dx$

$$3e^{4x^3 + 7x} + C$$

2) $\int ((24x^2 + 160x^4)e^{2x^3 + 8x^5})dx$

$$4e^{2x^3 + 8x^5} + C$$

3) $\int ((-80x - 80x^3)e^{8x^2 + 4x^4})dx$

$$-5e^{8x^2 + 4x^4} + C$$

4) $\int ((10x^4 + 12)e^{x^5 + 6x})dx$

$$2e^{x^5 + 6x} + C$$

5) $\int ((25x^4 + 50x)e^{x^5 + 5x^2})dx$

$$5e^{x^5 + 5x^2} + C$$

6) $\int ((72x^3 + 20x^4)e^{9x^4 + 2x^5})dx$

$$2e^{9x^4 + 2x^5} + C$$

7) $\int ((-135x^2 - 60x^3)e^{9x^3 + 3x^4})dx$

$$-5e^{9x^3 + 3x^4} + C$$

8) $\int ((256x^3 + 40x^4)e^{8x^4 + x^5})dx$

$$8e^{8x^4 + x^5} + C$$



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Integration by Substitution

Find each indefinite integral.

9) $\int ((28x + 28x^3)e^{2x^2 + x^4})dx$

$$7e^{2x^2 + x^4} + C$$

10) $\int ((150x^4 + 18)e^{5x^5 + 3x})dx$

$$6e^{5x^5 + 3x} + C$$

11) $\int ((45x^4 + 30x)e^{3x^5 + 5x^2})dx$

$$3e^{3x^5 + 5x^2} + C$$

12) $\int ((-56x - 32)e^{7x^2 + 8x})dx$

$$-4e^{7x^2 + 8x} + C$$

13) $\int ((-60x^2 - 64x)e^{5x^3 + 8x^2})dx$

$$-4e^{5x^3 + 8x^2} + C$$

14) $\int ((24x^3 + 7)e^{6x^4 + 7x})dx$

$$e^{6x^4 + 7x} + C$$

15) $\int ((60x^2 + 50x)e^{4x^3 + 5x^2})dx$

$$5e^{4x^3 + 5x^2} + C$$

16) $\int ((-54x^2 - 70x^4)e^{9x^3 + 7x^5})dx$

$$-2e^{9x^3 + 7x^5} + C$$

