

Integrate each of the following.

1.  $\int x^3 dx =$  \_\_\_\_\_

2.  $\int 3x^5 dx =$  \_\_\_\_\_

3.  $\int 7 dx =$  \_\_\_\_\_

4.  $\int (x^2 + 5x - 2) dx =$  \_\_\_\_\_

5.  $\int (2x^2 - 3x + 4) dx =$  \_\_\_\_\_

6.  $\int 3\sqrt{x} dx =$  \_\_\_\_\_

7.  $\int \sqrt[3]{x} dx =$  \_\_\_\_\_

8.  $\int (x - 5)^2 dx =$  \_\_\_\_\_

9.  $\int -3x(x^2 + x - 2) dx =$  \_\_\_\_\_

10.  $\int (3x + 1)^3 dx =$  \_\_\_\_\_

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Evaluate each of the following. Show all of your work neatly organized.

11.  $\int_0^2 x^3 dx = \underline{\hspace{2cm}}$

12.  $\int_1^3 2x^3 dx = \underline{\hspace{2cm}}$

13.  $\int_2^5 (3x + 2) dx = \underline{\hspace{2cm}}$

14.  $\int_1^4 \sqrt{x} dx = \underline{\hspace{2cm}}$

15.  $\int_2^5 (x^2 - 2x + 3) dx = \underline{\hspace{2cm}}$