

NAME: _____

Math 163 (Cowen)

Test 4 (Retake)

18 April 2007

There are 5 pages, 20 questions, and 110 points on this test. No partial credit!

You will have 1 hour to complete this test!

For each question, find an anti-derivative, an indefinite integral, or the definite integral, as indicated.

(10 points) 1. $f'(x) = 5x^5 - 12.6x^2 - 11.8x + 12.1$
 $f(x) =$

(10 points) 2. $g'(t) = 3\sqrt{t^9} - \frac{6}{\sqrt[5]{t}} + \frac{7}{t^6}$
 $g(t) =$

(10 points) 3. $h'(r) = \frac{r^4 - 2r^3 + 4}{r^2}$
 $h(r) =$

(10 points) 4. $R'(\theta) = 5 \cos \theta + 4(\csc \theta)^2$
 $R(\theta) =$

(10 points) 5. $\int x^4 - 8x + 4 dx =$

(10 points) 6. $\int r^3(3r^4 - 5) dr =$

(10 points) 7. $\int \frac{3x^5 + 4\sqrt{x} - 6}{x} dx =$

(10 points) 8. $\int 4 \sin \theta - 2(\csc \theta)^2 d\theta =$

(10 points) 9. $\int (3 - 7z)^5 dz =$

(10 points) 10. $\int (y^2 + 3)^5 y dy =$

(10 points) 11. $\int \sqrt[3]{4x + 2} dx =$

(10 points) 12. $\int 8 \sin 3t - 3 \sec 5t \tan 5t dt =$

(10 points) 13. $\int 3x \sin(x^2 - 2) dx =$

(10 points) 14. $\int \frac{\sqrt{6}}{3r + 4} dr =$

(10 points) 15. $\int e^{2y+5} dy =$

(10 points) 16. $\int e^{-8t} dt =$