

## Quiz #7 (Group)

Date \_\_\_\_\_ Period \_\_\_\_\_

For each problem, approximate the area under the curve over the given interval using 4 left endpoint rectangles.

1)  $g = -s^2 + 2s + 11$ ;  $[0, 4]$

- A)  $\frac{83}{2} = 41.5$       B) 126  
C) 42                      D) 43

For each problem, approximate the area under the curve over the given interval using 4 right endpoint rectangles.

2)  $t = -\frac{1}{x}$ ;  $[-6, -2]$

- A)  $\frac{17}{60} \approx 0.283$       B)  $\frac{47}{60} \approx 0.783$   
C)  $\frac{77}{60} \approx 1.283$       D)  $\frac{137}{60} \approx 2.283$

Evaluate each definite integral.

3)  $\int_{-1}^2 (-w^3 + 2w^2 - 4) dw$

- A)  $-\frac{39}{2} = -19.5$   
B)  $-\frac{39}{10} = -3.9$   
C)  $-\frac{39}{4} = -9.75$   
D) 39

4)  $\int_{-2}^{-1} 5x^{\frac{1}{3}} dx$

- A)  $\frac{15 - 30\sqrt[3]{2}}{4} \approx -5.699$   
B)  $-\frac{9}{2} = -4.5$   
C)  $\frac{15 - 34\sqrt[3]{2}}{4} \approx -6.959$   
D)  $\frac{5 - 10\sqrt[3]{2}}{2} \approx -3.8$

5)  $\int_{-3}^{-2} \frac{5}{r^3} dr$

- A)  $-\frac{25}{72} \approx -0.347$   
B)  $-\frac{3}{8} = -0.375$   
C)  $-\frac{26}{63} \approx -0.413$   
D)  $-\frac{25}{79} \approx -0.316$

6)  $\int_{-\frac{3\pi}{4}}^{-\frac{\pi}{2}} -2\csc s \cot s ds$

- A)  $-2 + 2\sqrt{5} \approx 2.472$   
B)  $-2 + 8\sqrt{2} \approx 9.314$   
C) -2  
D)  $-2 + 2\sqrt{2} \approx 0.828$

Evaluate each indefinite integral.

7)  $\int 48t^3(4t^4 - 5)^3 dt$

A)  $\frac{3}{4}(4t^4 - 5)^4 + C$

B)  $\frac{2}{5}(4t^4 - 5)^5 + C$

C)  $\frac{1}{3}(4t^4 - 5)^6 + C$

D)  $\frac{4}{5}(4t^4 - 5)^5 + C$

8)  $\int (r - 3)^4 \cdot 2r dr$

A)  $\frac{2}{3}(r - 3)^6 + \frac{12}{5}(r - 3)^5 + C$

B)  $\frac{3}{5}(r - 3)^5 + \frac{9}{4}(r - 3)^4 + C$

C)  $\frac{1}{3}(r - 3)^6 + \frac{6}{5}(r - 3)^5 + C$

D)  $\frac{1}{7}(r - 3)^7 + \frac{1}{2}(r - 3)^6 + C$

9)  $\int 5t^4(t^5 + 3)^{\frac{4}{3}} dt$

A)  $\frac{10}{3}(t^5 + 3)^{\frac{3}{2}} + C$

B)  $\frac{3}{7}(t^5 + 3)^{\frac{7}{3}} + C$

C)  $\frac{8}{3}(t^5 + 3)^{\frac{3}{2}} + C$

D)  $\frac{15}{8}(t^5 + 3)^{\frac{8}{5}} + C$

10)  $\int 8\cos -2\operatorname{csc}^2(\sin -2s) ds$

A)  $4\sin(\sin -2s) + C$

B)  $4\cot(\sin -2s) + C$

C)  $4\tan(\sin -2s) + C$

D)  $4\cos(\sin -2s) + C$