

Unit 6 Review Key

1. $-\frac{1}{2x^2} - 2x + C$

2. $\frac{1}{8}\sin(2x^4 - 1) + C$

3. 156

4. $\frac{2\sqrt{10} - 4\sqrt{2}}{3}$

5. $\frac{1}{10}\tan^{-1}\left(\frac{2x}{5}\right) + C$

6. $2\ln 2$

7. $\frac{1}{2}\tan^{-1}\left(\frac{3x}{2}\right) + C$

8. $-\frac{1}{2x^2} - 2x + C$

9. $\frac{1}{2}$

10. $-\frac{1}{16(4x^2 + 1)^2} + C$

11. $\frac{1}{15}$

12. $\sin^{-1}\left(\frac{x+2}{5}\right) + C$

13. $\frac{1}{4}\sec(4x) + C$

14. e

15. $\frac{15}{4}$

16. $-\frac{1}{3}\ln|1 + \cos 3x| + C$

17. $\frac{\tan^4(5x)}{20} + C$

18. $\sqrt{y^2 + 1} + C$

19. 4

20. $-\frac{5^{\cot x}}{\ln 5} + C$

21. $\frac{1}{10}(1 + \sin x)^{10} + C$

22. $\sin^{-1}\left(\frac{x}{3}\right) + C$

23. -19

$$24. -\frac{1}{4(3x^2+1)^4} + C$$