Answers.

Solutions follow this section.

1. $(2t^3+1)^{\frac{1}{2}}+C$
2. $[-\sin(4x^2+3x+2)](8x+3)$
3. $-\cos(\cos x)\sin x$
4. $\cot(x)$
5. $\frac{12x^2+14x}{4x^3+7x^2}$
6. $-\frac{2}{9}(9x^2+3)^{-1}+C$
7. $3\cos(x)+4\sin(x)$
8. $-5\cos^4(x)\sin x$
9. $2[\sin(6x^2+3x)][\cos(6x^2+3x)][12x+3]$
10. $-\frac{2}{5}(1+\cos(x))^{\frac{5}{2}}+C$
11. $-2(\cos(x))^{\frac{1}{2}}+C$
12. $\frac{(1+\sin(x))^2}{2}+C$
13. $-\frac{\csc\left(x^{\frac{1}{2}}\right)\cot\left(x^{\frac{1}{2}}\right)}{2x^{\frac{1}{2}}}$
14. $\frac{3}{2}\frac{\sec^3(x)\tan(x)}{\sqrt{1+\sec^3(x)}}$
15. $[-\csc^2(x^2+2x)](2x+2)$
16. $3[\cos(\tan(3x))][\sec^2(3x)]$
17. $2\tan\left(x^{\frac{1}{2}}\right)-2x^{\frac{1}{2}}+C$
18. $\frac{\tan^2(3x)}{6}+C$ or $\frac{\sec^2(3x)}{6}+C$
19. $\frac{(\tan(x))^8}{8}+C$
20. $\frac{1}{3}\sec^3(x)+C$