1. Express the indefinite integral \( \int 4 (\cos(x))^3 \sin(x) \, dx \) in terms of elementary functions. Use the symbol C to denote an arbitrary constant.

2. Express the indefinite integral \( \int 4 (\cos(x))^3 (\sin(x))^4 \, dx \) in terms of elementary functions. Use the symbol C to denote an arbitrary constant.

3. Express in simplified form the value of \( \int_0^{\frac{3\pi}{2}} 4 (\cos(x))^3 (\sin(x))^3 \, dx \).

4. Express in simplified form the value of \( \int_0^{\frac{3\pi}{2}} 5 \cos(x) (\sin(x))^2 \, dx \).

5. Express the indefinite integral \( \int 5 \cos(x) \sqrt{\sin(x)} \, dx \) in terms of elementary functions. Use the symbol C to denote an arbitrary constant.

6. Express the indefinite integral \( \int 3 \sqrt{\cos(x)} (\sin(x))^3 \, dx \) in terms of elementary functions. Use the symbol C to denote an arbitrary constant.

7. Express in simplified form the value of \( \int_{\frac{\pi}{2}}^{\pi} 3 \cos(x) \sqrt{\sin(x)} \, dx \).

8. Express in simplified form the value of \( \int_{\frac{\pi}{2}}^{\pi} 3 \sqrt{\cos(x)} \sin(x) \, dx \).

9. Express the indefinite integral \( \int 5 (\cos(t))^2 \, dt \) in terms of elementary functions. Use the symbol C to denote an arbitrary constant.
1. $- (\cos(x))^4 + C$

2. $\frac{4 (\sin(x))^5}{5} - \frac{4 (\sin(x))^7}{7} + C$

3. $\frac{1}{3}$

4. $-\frac{5}{3}$

5. $\frac{10 (\sin(x))^{\frac{3}{2}}}{3} + C$

6. $\frac{6 (\cos(x))^2}{7} - 2 (\cos(x))^{\frac{5}{2}} + C$

7. $-2$

8. $2 - \frac{2}{2^4}$

9. $\frac{5 \sin(2t)}{4} + \frac{5t}{2} + C$