

Let $u = 3\theta$.

$$\frac{1}{\sin(3\theta)\cos(3\theta)} = \frac{1}{\sin(u)\cos(u)}$$

$$= \frac{2 \cdot 1}{2\sin(u)\cos(u)}$$

$$= \frac{2}{\sin(2u)}$$

$$= 2 \cdot \frac{1}{\sin(2u)}$$

$$= 2 \cdot \csc(2u)$$

$$= 2 \cdot \csc(2(3\theta))$$

$$= 2\csc(6\theta)$$