

2.24
1

$$\cos^2 x \sin^3 x = \frac{1}{16} (2\sin x + \sin 3x - \sin 5x)$$

$$\cos^2 x \sin^2 x = \frac{1}{16} (2\sin x - 2\sin x \cos 4x)$$

$$\cos^2 x \sin^2 x = \frac{\sin x}{8} (1 - \cos 4x)$$

$$= \frac{\sin x}{8} (1 - (1 - 2\sin^2 2x))$$

$$= \frac{\sin x}{8} 2\sin^2 2x = \frac{1}{4} (\sin x \cos 2x)^2$$

$$\sin^3 x \cos^2 x = \sin^2 x \cos^2 x$$