## 常见的三角积式展开的推导

Saturday June 24 2023

2. 
$$\cos^{2} \psi = \frac{3}{4} \cos \psi + \frac{1}{4} \cos 3\psi$$

$$(3)^{2} = \frac{3}{4} \cos \psi + \frac{1}{4} \cos 3\psi$$

$$(3)^{2} = \frac{1}{4} \cos^{2} \psi + \cos (3) = \frac{1}{2} [\cos(3) + \cos(3) + \cos(3)]$$

$$(3)^{2} = \cos^{2} \psi + \cos \psi = \frac{1}{2} [\cos(3) + \cos(3) + \cos(3) + \cos(3)]$$

$$(3)^{2} = \frac{1}{4} [\cos(3) + \cos(4)] + \frac{1}{2} \cos(4) = \frac{3}{4} \cos(4) + \frac{1}{4} \cos(4)$$

$$(3)^{2} = \frac{1}{4} [\cos(3) + \cos(4)] + \frac{1}{4} \cos(4) = \frac{3}{4} \cos(4) + \frac{1}{4} \cos(4)$$

$$(3)^{2} = \frac{1}{4} [\cos(3) + \cos(4)] + \frac{1}{4} \cos(4)$$

$$(4)^{2} = \frac{1}{4} [\cos(4) + \frac{1}{4} \cos(4)] + \frac{1}{4} \cos(4)$$

$$(5)^{2} = \frac{1}{4} \cos(4) + \frac{1}{4} \cos(4) + \frac{1}{4} \cos(4)$$

$$(6)^{2} = \frac{1}{4} \cos(4) + \frac{1}{4} \cos(4)$$

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$$(7)^{2} = \frac{1}{4} \cos(4) + \frac{1}{4} \cos(4)$$

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

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$$(9)^{2} = \frac{1}{4} \cos(4) + \frac{1}{4}$$