Dynamics Notes

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Test Cases

Original expression:

$$\cos^2(2\phi - \theta) \tag{1}$$

Final expression:

$$\frac{\cos(4\phi - 2\theta)}{2} + \frac{1}{2} \tag{2}$$

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Original expression:

$$\frac{1}{\cos^2(2\phi - \theta)} \tag{3}$$

Final expression:

$$\frac{2}{\cos(4\phi - 2\theta) + 1} \tag{4}$$

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Original expression:

$$\cos(2\phi - 3\theta)\cos(2\phi - \theta) \tag{5}$$

Final expression:

$$\frac{\cos(2\theta)}{2} + \frac{\cos(4\phi - 4\theta)}{2} \tag{6}$$

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Original expression:

$$\tan^2(2\phi - \theta) \tag{7}$$

Final expression:

$$\tan^2(2\phi - \theta) \tag{8}$$

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Original expression:

$$\cos^3(2\phi - \theta) + \cos^2(2\phi - \theta) \tag{9}$$

Final expression:

$$\frac{(\cos(2\phi-\theta)+1)(\cos(4\phi-2\theta)+1)}{2} \tag{10}$$

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Original expression:

$$\sin^2(2\phi-\theta)\cos^4(2\phi-\theta) \tag{11}$$

Final expression:

$$\frac{(1-\cos(4\phi-2\theta))(\cos(4\phi-2\theta)+1)^2}{8} \tag{12}$$

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Original expression:

$$\sin(2\phi-\theta)\cos^{3.5}(2\phi-\theta) \tag{13}$$

Final expression:

$$\frac{(\cos(4\phi-2\theta)+1)\sin(2\phi-\theta)\cos^{\frac{3}{2}}(2\phi-\theta)}{2} \tag{14}$$

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Original expression:

$$\sin(2\phi-\theta)\cos^3(2\phi-\theta) \tag{15}$$

Final expression:

$$\frac{(\cos(4\phi-2\theta)+1)\sin(2\phi-\theta)\cos(2\phi-\theta)}{2} \tag{16}$$

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