

# 三角関数（積を和・差になおす公式）

$$\sin \bullet \cos \blacktriangle = \frac{1}{2} \{ \sin(\bullet + \blacktriangle) + \sin(\bullet - \blacktriangle) \}$$

$$\cos \bullet \sin \blacktriangle = \frac{1}{2} \{ \sin(\bullet + \blacktriangle) - \sin(\bullet - \blacktriangle) \}$$

$$\cos \bullet \cos \blacktriangle = \frac{1}{2} \{ \cos(\bullet + \blacktriangle) + \cos(\bullet - \blacktriangle) \}$$

$$\sin \bullet \sin \blacktriangle = - \frac{1}{2} \{ \cos(\bullet + \blacktriangle) - \cos(\bullet - \blacktriangle) \}$$

# 三角関数（和・差を積になおす公式）

$$\sin \bullet + \sin \blacktriangle = 2 \sin \frac{\bullet + \blacktriangle}{2} \cos \frac{\bullet - \blacktriangle}{2}$$

$$\sin \bullet - \sin \blacktriangle = 2 \cos \frac{\bullet + \blacktriangle}{2} \sin \frac{\bullet - \blacktriangle}{2}$$

$$\cos \bullet + \cos \blacktriangle = 2 \cos \frac{\bullet + \blacktriangle}{2} \cos \frac{\bullet - \blacktriangle}{2}$$

$$\cos \bullet - \cos \blacktriangle = -2 \sin \frac{\bullet + \blacktriangle}{2} \sin \frac{\bullet - \blacktriangle}{2}$$