C12 - 6.5 - Expand Sum Difference WS

Expand:

$$\sin(x + \frac{\pi}{3})$$

$$\sin(x - \pi)$$

$$\cos(x + \frac{\pi}{6})$$

$$\cos(x + \frac{\pi}{4})$$

Find the exact value of the following:

$$cos15^o =$$

$$sin75^o =$$

$$\cos\left(\frac{\pi}{12}\right) =$$

$$sin-15^o =$$

$$csc15^0$$

$$\cos\left(\frac{7\pi}{12}\right) =$$

C12 - 6.5 - Simplify Sum Difference WS

Simplify to a single trigonometric identity:

$cos2x\ cosx + sin2x\ sinx$

$sin3x\ cosx - cos3x\ sinx$

$sinA\ cos2A + cosA\ sin2A$

$cosB\ cos3B - sinB\ sin3B$

Find the exact value of:

$\cos\left(\dfrac{\pi}{3}\right)\cos\left(\dfrac{\pi}{6}\right) + \sin\left(\dfrac{\pi}{3}\right)\sin\left(\dfrac{\pi}{6}\right)$

$\sin\left(\dfrac{11\pi}{12}\right)\cos\left(\dfrac{\pi}{12}\right) - \cos\left(\dfrac{11\pi}{12}\right)\sin\left(\dfrac{\pi}{12}\right)$