

Group: _____ Present: _____

1. Complete the computation to find $\sin(\frac{7\pi}{12})$:

$$\sin(\frac{7\pi}{12}) = \sin(\frac{9\pi}{12} - \frac{2\pi}{12}) = \sin(\frac{3\pi}{4} - \frac{\pi}{6})$$

$$= \sin(\text{_____}) \cos(\text{_____}) - \cos(\text{_____}) \sin(\text{_____})$$

$$= \text{_____} = \text{_____}$$

2. Write $\frac{5\pi}{12}$ as a sum or difference of “nice” angles, and then use an appropriate formula to find the exact value of $\cos(\frac{5\pi}{12})$.

$$\frac{5\pi}{12} =$$

$$\cos(\frac{5\pi}{12}) =$$

3. Verify the identity $\sin(2x - \frac{\pi}{2}) = 2\sin^2(x) - 1$.

4. Find all exact solutions of the equation $\sin(2x)\sin(x) = \cos(x)$ using sum or difference identities.