

### PC 6-5 Part A

Use the sum/difference formulas to find each of the following. Do not use a calculator.

1)  $\sin \frac{5\pi}{12}$

2)  $\sin \frac{\pi}{12}$

3)  $\cos \frac{7\pi}{12}$

4)  $\tan \frac{7\pi}{12}$

5)  $\sin \frac{17\pi}{12}$

6)  $\cos \frac{19\pi}{12}$

7)  $\sec \left( -\frac{\pi}{12} \right)$

8)  $\cot \left( -\frac{5\pi}{12} \right)$

Think backwards for these problems: It's still using the sum and difference formulas, but in reverse.

9)  $\sin \frac{\pi}{12} \cos \frac{7\pi}{12} - \cos \frac{\pi}{12} \sin \frac{7\pi}{12}$

10)  $\cos \frac{5\pi}{12} \cos \frac{7\pi}{12} - \sin \frac{5\pi}{12} \sin \frac{7\pi}{12}$

11)  $\sin \frac{\pi}{12} \cos \frac{5\pi}{12} - \sin \frac{5\pi}{12} \cos \frac{\pi}{12}$

12)  $\sin \frac{\pi}{18} \cos \frac{5\pi}{18} + \cos \frac{\pi}{18} \sin \frac{5\pi}{18}$

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