Supplemental Worksheet #8

Calculate the exact values of each of the following using the appropriate sum or difference of angles formula.

1. $\sin 75°$

2. $\cos 15°$

3. $\sin\left(\dfrac{\pi}{12}\right)$

4. $\tan 105°$

5. $\cos\left(\dfrac{7\pi}{12}\right)$

6. $\sin 105°$

7. $\cos\left(\dfrac{5\pi}{12}\right)$

8. $\tan\left(\dfrac{\pi}{12}\right)$

If α and β are both in quadrant I, answer the following.

9. Find $\sin(\alpha+\beta)$ if $\sin\alpha = \dfrac{4}{5}$ and $\sin\beta = \dfrac{5}{13}$.

10. Find $\cos(\alpha-\beta)$ if $\sin\alpha = \dfrac{8}{17}$ and $\cos\beta = \dfrac{3}{5}$.

11. Find $\sin(\alpha-\beta)$ if $\cos\alpha = \dfrac{12}{13}$ and $\cos\beta = \dfrac{15}{17}$.

12. Find $\tan(\alpha+\beta)$ if $\sin\alpha = \dfrac{3}{5}$ and $\cos\beta = \dfrac{5}{13}$.