PreCalculus   Name _____
Sum and Difference Identities WS 1 – Sine

Find the exact value of each expression.

1. $\sin\left(\dfrac{7\pi}{6} - \dfrac{\pi}{3}\right)$

2. $\sin\dfrac{7\pi}{6} - \sin\dfrac{\pi}{3}$

Use the sum and difference formulas to find the exact values of the sine of the angle.

3. $75° = 30° + 45°$

4. $105° = 60° + 45°$

5. $195° = 225° - 30°$

6. $\dfrac{11\pi}{12} = \dfrac{3\pi}{4} + \dfrac{\pi}{6}$

Find the exact value of the trigonometric function given the following:

$\sin u = \dfrac{5}{13}, \quad 0 < u < \dfrac{\pi}{2}$ and $\cos v = -\dfrac{3}{5}, \quad \dfrac{\pi}{2} < v < \pi$

7. $\sin(u + v)$

8. $\sin(u - v)$