PreCalculus   Name_____
More Double and Half Angle Identities WS

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1. Use a double angle identity to find the exact value of $\cos 450^o$.

2. Use a half angle identity to find the exact value of $\sin \frac{11\pi}{12}$.

*** Show the expansion, substitution, and simplified answer as separate steps! ***
Use the given information to find the exact values of each trig function below:

α is in quadrant II and $\csc \alpha = \frac{13}{5}$

β is in quadrant III and $\cot \beta = \frac{4}{3}$

θ is in quadrant IV and $\sec \theta = \frac{25}{7}$

3. $\sin 2\alpha$

4. $\tan 2\beta$

5. $\cos 2\theta$

6. $\sin \frac{\beta}{2}$

7. $\cos \frac{\alpha}{2}$

8. $\tan \frac{\theta}{2}$

Answers: 1) 0   2) $\frac{\sqrt{2-\sqrt{3}}}{2}$ 3) $-\frac{120}{169}$ 4) $\frac{24}{7}$ 5) $-\frac{527}{625}$ 6) $\frac{3\sqrt{10}}{10}$ 7) $\frac{\sqrt{26}}{26}$ 8) $-\frac{3}{4}$