

## 6.5 Double-Angle and Half-Angle Identities

Name \_\_\_\_\_

If  $\sin A = \frac{12}{13}$  and  $A$  is in the first quadrant, find each value.

1.  $\cos 2A$

2.  $\sin 2A$

3.  $\tan 2A$

4.  $\cos \frac{A}{2}$

5.  $\sin \frac{A}{2}$

6.  $\tan \frac{A}{2}$

Given that  $\cos B = \frac{7}{25}$  and  $B$  is in quadrant IV, find the exact value..

7.  $\sin 2B$

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

Use a half-angle identity to find each value.

8.  $\tan 22.5^\circ$

9.  $\cos 112.5^\circ$

10.  $\sin 67.5^\circ$