

Name \_\_\_\_\_

Date \_\_\_\_\_ Period \_\_\_\_\_

**Use a double-angle identity to find the exact value of each expression.**

1)  $\cos \theta = \frac{4}{5}$  and  $270^\circ < \theta < 360^\circ$   
Find  $\tan 2\theta$

2)  $\cos \theta = \frac{15}{17}$  and  $270^\circ < \theta < 360^\circ$   
Find  $\sin 2\theta$

3)  $\sin \theta = \frac{3}{7}$  and  $90^\circ < \theta < 180^\circ$   
Find  $\cos 2\theta$

4)  $\tan \theta = \frac{3}{4}$  and  $0^\circ < \theta < 90^\circ$   
Find  $\sin 2\theta$

5)  $\sin \theta = \frac{2\sqrt{13}}{13}$  and  $90^\circ < \theta < 180^\circ$   
Find  $\tan 2\theta$

6)  $\sin \theta = \frac{7}{25}$  and  $90^\circ < \theta < 180^\circ$   
Find  $\cos 2\theta$

7)  $\cos \theta = \frac{2}{9}$  and  $0^\circ < \theta < 90^\circ$   
Find  $\sin 2\theta$

8)  $\sin \theta = \frac{8}{17}$  and  $0^\circ < \theta < 90^\circ$   
Find  $\tan 2\theta$

9)  $\tan \theta = -4$  and  $90^\circ < \theta < 180^\circ$   
Find  $\tan 2\theta$

10)  $\tan \theta = -\frac{3}{4}$  and  $270^\circ < \theta < 360^\circ$   
Find  $\tan 2\theta$

11)  $\cos \theta = -\frac{15}{17}$  and  $180^\circ < \theta < 270^\circ$   
Find  $\sin 2\theta$

12)  $\sin \theta = -\frac{3\sqrt{5}}{10}$  and  $270^\circ < \theta < 360^\circ$   
Find  $\sin 2\theta$

13)  $\sin \theta = \frac{4\sqrt{3}}{7}$  and  $0^\circ < \theta < 90^\circ$   
Find  $\cos 2\theta$

14)  $\tan \theta = -\frac{3}{4}$  and  $90^\circ < \theta < 180^\circ$   
Find  $\sin 2\theta$

15)  $\cos \theta = -\frac{\sqrt{205}}{23}$  and  $180^\circ < \theta < 270^\circ$   
Find  $\cos 2\theta$

16)  $\sin \theta = \frac{7}{25}$  and  $0^\circ < \theta < 90^\circ$   
Find  $\cos 2\theta$

17)  $\sin \theta = -\frac{5}{13}$  and  $270^\circ < \theta < 360^\circ$   
Find  $\sin 2\theta$

18)  $\sin \theta = \frac{3}{5}$  and  $90^\circ < \theta < 180^\circ$   
Find  $\cos 2\theta$

19)  $\sin \theta = -\frac{8}{17}$  and  $180^\circ < \theta < 270^\circ$   
Find  $\sin 2\theta$

20)  $\sin \theta = -\frac{3}{5}$  and  $270^\circ < \theta < 360^\circ$   
Find  $\cos 2\theta$