SATPREP Name_____

Assignment: Double Angle Identity

Date_____

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

1) $\tan\theta = -\frac{15\sqrt{31}}{31}$ and $270° < \theta < 360°$
Find $\cos 2\theta$

2) $\cos\theta = \frac{1}{2}$ and $270° < \theta < 360°$
Find $\cos 2\theta$

3) $\cos\theta = \frac{\sqrt{10}}{5}$ and $0° < \theta < 90°$
Find $\sin 2\theta$

4) $\cos\theta = \frac{12}{13}$ and $270° < \theta < 360°$
Find $\cos 2\theta$

5) $\sin\theta = \frac{\sqrt{6}}{3}$ and $90° < \theta < 180°$
Find $\sin 2\theta$

6) $\tan\theta = -\frac{8}{15}$ and $90° < \theta < 180°$
Find $\tan 2\theta$

7) $\cos\theta = -\frac{12}{13}$ and $180° < \theta < 270°$
Find $\sin 2\theta$

8) $\sin\theta = \frac{3}{5}$ and $90° < \theta < 180°$
Find $\tan 2\theta$

9) $\cos\theta = \frac{\sqrt{2}}{2}$ and $270° < \theta < 360°$
Find $\sin 2\theta$

10) $\sin\theta = -\frac{1}{10}$ and $270° < \theta < 360°$
Find $\tan 2\theta$

Answers to Assignment: Double Angle Identity

1) $-\frac{97}{128}$

2) $-\frac{1}{2}$

3) $\frac{2\sqrt{6}}{5}$

4) $\frac{119}{169}$

5) $-\frac{2\sqrt{2}}{3}$

6) $-\frac{240}{161}$

7) $\frac{120}{169}$

8) $-\frac{24}{7}$

9) -1

10) $-\frac{3\sqrt{11}}{49}$