

**Double Angle Identities**

Mr. Murphy

Name \_\_\_\_\_

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$$\cos A = -\frac{7}{25} \text{ in Quadrant III, } \sin P = -\frac{15}{17} \text{ in Quadrant IV, } \tan B = -\sqrt{3} \text{ in Quadrant II}$$

Use the above information to answer problems 1 and 2

1) Find the value of  $\cos(2A)$ 2) Find the value of  $\sin(2P)$ 3) Find the value of  $\tan(2B)$  (hint: use sine and cosine)

4) Find all possible solutions for  $0 \leq x \leq 360^\circ$  or  $0 \leq \theta \leq 360^\circ$

a)  $2 \sin x \cos x = -\frac{\sqrt{3}}{2}$

b)  $2 \cos^2 A = 1 + \frac{\sqrt{2}}{2}$

c)  $\cos^2 3\theta - \sin^2 3\theta = -\frac{1}{2}$