

Name \_\_\_\_\_

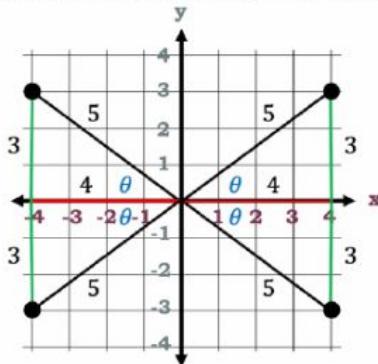
Date \_\_\_\_\_

Year Group \_\_\_\_\_

**Use the half-angle formulas to find the exact values**

Find the exact values of  $\sin(2\theta)$ ,  $\cos(2\theta)$ , and  $\tan(2\theta)$  for  $\sec(\theta) = \frac{5}{4}$ ;  $-90^\circ < \theta < 0^\circ$

1. Please click on the triangle that makes the given true



2. Find the values of the following trigonometric functions

Answer =>  $\sin(\theta) = \underline{\quad} / \underline{\quad}$     $\cos(\theta) = \underline{\quad} / \underline{\quad}$     $\tan(\theta) = \underline{\quad} / \underline{\quad}$

3. Find  $\sin(2\theta)$ ,  $\cos(2\theta)$ , and  $\tan(2\theta)$

$$\sin(2\theta) = 2 * \sin \theta * \cos \theta$$

$$\cos(2\theta) = \cos^2 \theta - \sin^2 \theta$$

Steps =>  $2 * \left(-\frac{\underline{\quad}}{\underline{\quad}}\right) * \left(-\frac{\underline{\quad}}{\underline{\quad}}\right)$

Steps =>  $\left(-\frac{\underline{\quad}}{\underline{\quad}}\right)^2 - \left(-\frac{\underline{\quad}}{\underline{\quad}}\right)^2$

Steps =>  $\underline{\quad} 2 * \underline{\quad} * \underline{\quad}$

Steps =>  $\underline{\quad} - \underline{\quad}$

Answer =>  $\underline{\quad} / \underline{\quad}$

Answer =>  $\underline{\quad} / \underline{\quad}$

$$\tan(2\theta) = \frac{2\tan \theta}{1-\tan^2 \theta} \quad \text{Answer =>} \quad \underline{\quad} / \underline{\quad}$$