

Warming Up Activity Trigonometry**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

1. The given identity $\frac{1 - \tan^2 A}{1 + \tan^2 A}$ is equal to
A) $\sin 2A$ C) $\tan 2A$
B) $\cos 2A$ D) $\cot 2A$

2. $\tan A + \cot A \equiv \dots$
A) $2\operatorname{cosec} 2A$ C) $2 \operatorname{cosec} A$
B) $2\sec 2A$ D) $2 \tan 2A$

3. Express $15 \sin \alpha - 8 \cos \alpha$ as a single trigonometry, where $R > 0$ and $0^\circ \leq \alpha \leq 90^\circ$.
A) $17 \sin(\alpha - 28.07^\circ)$ C) $17 \cos(\alpha - 28.07^\circ)$
B) $17 \sin(\alpha + 28.07^\circ)$ D) $17 \sin(\alpha + 28.07^\circ)$

4. Express $2 \cos^2(34^\circ) - 1$ as a single trigonometry.
A) $\cos 68^\circ$ C) $\sin 68^\circ$
B) $\cos 34^\circ$ D) $\sin 34^\circ$

5. The solution of the equation $\sec x = -1, 0 \leq x \leq 2\pi$ are

A) $\frac{\pi}{2}$

C) π

B) $\frac{\pi}{3}$

D) 2π

6. Express $\cos \alpha - \sin \alpha$ as a single trigonometry, where $\mathbb{R} > 0$ and $0 \leq \alpha \leq \frac{\pi}{2}$.

A) $2\sqrt{2} \cos\left(\alpha + \frac{\pi}{4}\right)$

C) $\sqrt{2} \cos\left(\alpha + \frac{\pi}{4}\right)$

B) $\cos\left(\alpha + \frac{\pi}{4}\right)$

D) $\sqrt{2} \cos\left(\alpha - \frac{\pi}{4}\right)$

7. Given that $\cos 2x = -\frac{527}{625}, 0^\circ \leq x \leq 90^\circ$. Find $\tan 2x$!

A) $\frac{336}{625}$

C) $\frac{7}{25}$

B) $-\frac{336}{527}$

D) $-\frac{24}{25}$

8. Given $\sin x = -\frac{3}{5}, 180^\circ \leq x \leq 270^\circ$. Find the exact value of $\cos 2x$!

A) $\frac{24}{25}$

C) $-\frac{7}{25}$

B) $\frac{7}{25}$

D) $-\frac{24}{25}$