

Trigonometric Inequalities

Name

Class

Date

A N S W E R S

1a

1b

2a

2b

3a

3b

Solve each inequality:

1. a. $4\cos^2 x - 3 \geq 0$

b. $3 - 4\sin^2 x \leq 0$

2. a. $\operatorname{tg}\left(x + \frac{\pi}{4}\right) \geq 1$

b. $\operatorname{ctg}\left(x - \frac{\pi}{4}\right) \leq 1$

3. a. $\sin(2x - 1) \geq \frac{1}{2}$

b. $\cos(2x + 1) \leq \frac{\sqrt{2}}{2}$

A

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1a

1b

2a

2b

1. Solve the following inequalities:

a. $\sin x + \cos 2x > 1$

b. $\cos x - \cos 2x < 1$

2. Solve the following inequalities in the interval $(0, \pi)$:

a. $\sin 2x + \sin x - \sqrt{2} \cos x < \frac{1}{\sqrt{2}}$

b. $\sin 2x - \cos x + \sqrt{2} \sin x \geq \frac{1}{\sqrt{2}}$

B