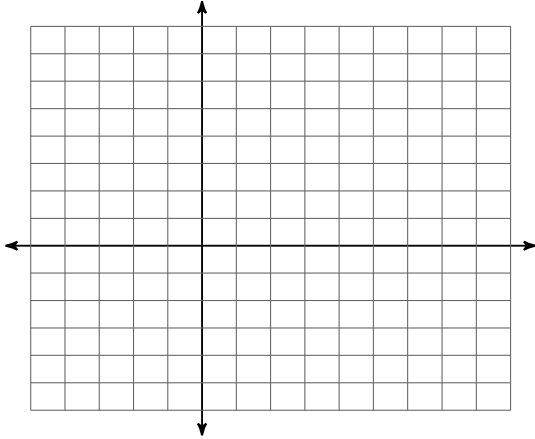


## Test 2

Date \_\_\_\_\_

**Sketch the graph.**

6)  $y = -4\sin\left(2x - \frac{\pi}{4}\right) - 2$

**Find the exact values of the five trigonometric ratios not given.**

7)  $\sec \theta = -\frac{5\sqrt{6}}{12}$  and  $\sin \theta > 0$

**Find the exact value of each expression.**

8)  $\csc^{-1} 2$

9)  $\tan^{-1}(-\sqrt{3})$

10)  $\cos^{-1} -\frac{\sqrt{2}}{2}$

11)  $\cot^{-1}\left(\sin \frac{3\pi}{2}\right)$

12)  $\csc^{-1}\left(\tan -\frac{\pi}{4}\right)$

13)  $\sec \tan^{-1} -\frac{3}{2}$

**State the number of possible triangles that can be formed below. No need to solve for the actual triangles, just show the work/setup that justifies your answer of either 0, 1, or 2 triangles.**

14)  $m\angle C = 26^\circ$ ,  $b = 17$  ft,  $c = 5$  ft

15)  $m\angle C = 19^\circ$ ,  $c = 35$  km,  $b = 13$  km

**Solve each triangle. Round your answers to the nearest tenth.**

16)  $c = 6$  in,  $a = 14$  in,  $b = 9$  in

17)  $m\angle B = 48^\circ$ ,  $a = 32$  ft,  $b = 29$  ft