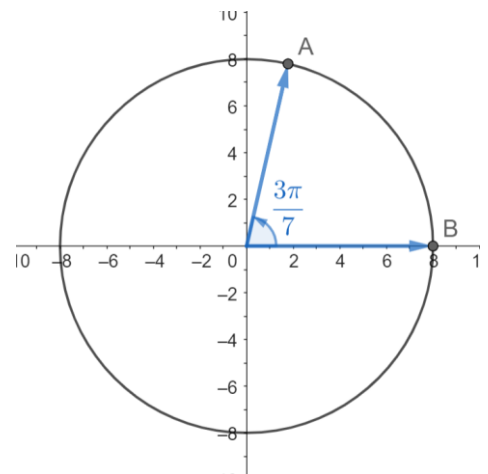


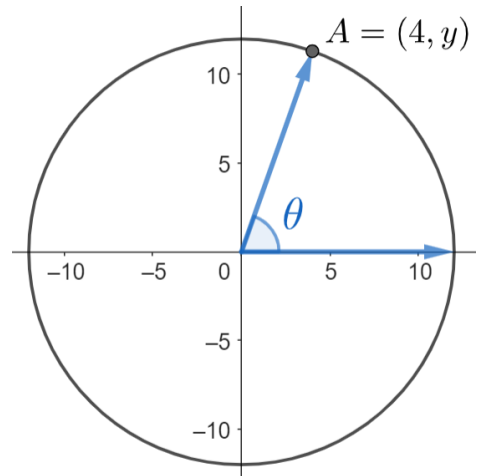
Intro to The Six Trig Functions (3.2) HW

- When graphed in standard form, the terminal side of angle θ passes through the point $(7, 24)$.
 - Find $\sin \theta$
 - Find $\tan \theta$
 - Find $\csc \theta$
- When graphed in standard form, the terminal side of angle α passes through the point $(4, 7)$.
 - Find $\cos \alpha$
 - Find $\cot \alpha$
 - Find $\tan \alpha$
- When graphed in standard form, the terminal side of angle β passes through the point $(8, -6)$.
 - Find $\sec \beta$
 - Find $\cot \beta$
 - Find $\sin \beta$
- When graphed in standard form, the terminal ray of the angle $\frac{2\pi}{5}$ passes through the point $(1, k)$. Use a calculator/Desmos to find k . Round to three decimal places.
- When graphed in standard form, the terminal ray of the angle $\frac{\pi}{3}$ passes through the point $(n, 4)$. Find n .
Give an exact answer, not a rounded answer.

- The figure gives the angle $\frac{3\pi}{7}$ graphed in standard form and a circle of radius 8 centered at the origin. Using a calculator/Desmos, find the coordinates of the point A, the point at which the terminal ray of the angle intersects the circle. Round to AP Precalculus's normal: 3 decimal places



7. As shown in the figure, the terminal ray of angle θ intersects a circle of radius 12 at point A. The x -coordinate of point A is 4.
- Find the y -value of point A. Write your answer in radical form, not a decimal.
 - Find $\cos \theta$
 - Find $\tan \theta$
 - Find $\sec \theta$
 - Find $\csc \theta$



8. When graphed in standard form, the terminal ray of β has slope $\frac{2}{3}$. Find $\cot \beta$.

Think you are done with the homework? Not yet. Your homework is to also make sure you have memorized $\sin \theta$, $\cos \theta$, $\tan \theta$, $\csc \theta$, $\sec \theta$, and $\cot \theta$ for the three “special angles” ($\frac{\pi}{6}$, $\frac{\pi}{4}$, and $\frac{\pi}{3}$). You need to know these. It is not optional. Practice by making flashcards, taking practice quizzes, or using the applet linked to by the QR code to the right. If you are on a device, you can click the QR code rather than scan it.



Intro to The Six Trig Functions HW Answers

1.

a. $\sin \theta = \frac{24}{25}$

b. $\tan \theta = \frac{24}{7}$

c. $\csc \theta = \frac{25}{24}$

2.

a. $\sec \alpha = \frac{4}{\sqrt{65}} = \frac{4\sqrt{65}}{65}$

b. $\cot \alpha = \frac{4}{7}$

c. $\tan \alpha = \frac{7}{4}$

3.

a. $\sec \beta = \frac{5}{4}$

b. $\cot \beta = -\frac{4}{3}$

c. $\sin \beta = -\frac{3}{5}$

4. $k = 3.078$

5. $n = \frac{4}{\sqrt{3}} = \frac{4\sqrt{3}}{3}$

6. $A = (1.780, 7.799)$

7.

a. $y = 8\sqrt{2}$

b. $\cos \theta = \frac{1}{3}$

c. $\tan \theta = 2\sqrt{2}$

d. $\sec \theta = 3$

e. $\csc \theta = \frac{3}{2\sqrt{2}} = \frac{3\sqrt{2}}{4}$

8. $\cot \beta = \frac{3}{2}$