Angles in Standard Position

1. Determine the quadrant(s) of termination of the following:

a) $\sin\theta > 0$

b) $\cos\theta > 0$

c) $\tan\theta < 0$

d) $\sin\theta < 0$

e) $\cos\theta < 0$

f) $\tan\theta < 0$

g) $\sin\theta > 0$ and $\cos\theta > 0$

h) $\cos\theta > 0$ and $\sin\theta < 0$

i) $\tan\theta > 0$ and $\sin\theta < 0$

j) $\tan\theta < 0$ and $\cos\theta > 0$

k) $\sin\theta < 0$ and $\cos\theta < 0$

l) $\cos\theta < 0$ and $\sin\theta > 0$

2. Find all unknown trigonometric function values, exact values. (No calculators)

a) $sin\theta = \frac{5}{13}$, $90° < \theta < 180°$

b) $cos\theta = -\frac{4}{5}$, $\theta\ in\ Quadrant\ III$

c) $\tan\theta = -\frac{1}{3}$, $\theta\ in\ Quadrant\ II$

d) $sin\theta = \frac{2}{3}$, $cos\theta < 0$

e) $cos\theta = \frac{5}{6}$, $sin\theta < 0$

f) $tan\theta = \frac{1}{2}$, $sin\theta > 0$

g) $cos\theta = -\frac{7}{9}$, $tan\theta < 0$

Answers:

2a.) $\cos\theta = -\frac{12}{13}$

$\tan\theta = -\frac{5}{12}$

b.) $\sin\theta = -\frac{3}{5}$

$\tan\theta = \frac{3}{4}$

c.) $\sin\theta = \frac{\sqrt{10}}{10}$

$\cos\theta = -\frac{3\sqrt{10}}{10}$

d.) $\cos\theta = -\frac{\sqrt{5}}{3}$

$\tan\theta = -\frac{2\sqrt{5}}{5}$

e.) $\sin\theta = -\frac{\sqrt{11}}{6}$

$\tan\theta = -\frac{\sqrt{11}}{5}$

f.) $\cos\theta = \frac{2\sqrt{5}}{5}$

$\sin\theta = \frac{\sqrt{5}}{5}$

g.) $\sin\theta = \frac{4\sqrt{2}}{9}$

$\tan\theta = -\frac{4\sqrt{2}}{7}$