7 TRIG VALUES **Show your work in your NOTEBOOK!**

PRECAL REVIEW!

1. Solve each such that $0 \le x < 2\pi$.

   a. $\tan x = \frac{\sqrt{3}}{3}$

   b. $\sin x = \frac{1}{2}$

   c. $\cos x = \frac{\sqrt{3}}{2}$

   d. $\tan x = -1$

   e. $\sin x = -1$

   f. $\cos x = 0$

   g. $\sin x = \frac{-\sqrt{2}}{2}$

   h. $\csc x = -\sqrt{2}$

   i. $\csc x = -\frac{2\sqrt{3}}{3}$

   j. $\tan x$ is undefined.

   k. $\cot x = 0$

2. Solve each equation such that $0 \le x < 2\pi$.

   a. $\cot^2 x - \cot x = 0$

   b. $2\cos^2 x - 7\cos x = 4$

   c. $\cos^2 x - \sin^2 x + \sin x = 0$

   d. $2\sin^2 x - 5\sin^2 x + 3\sin x = 0$

   e. $\sin^2 x = 2\cos x + 2$

   f. $4\cos^2 x = 1$

   g. $3\cos x + 3 = 2\sin^2 x$

   h. $\sin 2x = \frac{\sqrt{3}}{2}$

   i. $\tan 3x = 1$

   j. $2\csc^2 x + \csc x = 1$

   k. $8\sin x\cos x - 4\sin x - 10\cos x + 5 = 0$

   l. $\tan x\sin x + \sin x - \tan x - 1 = 0$

   m. $3\cot^2 x = 1$

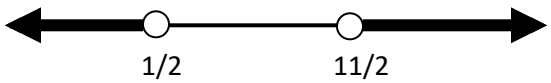
   n. $3\sec x\sin x - 6\sin x = 4\sec x - 8$

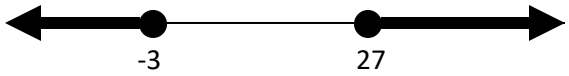
   o. $2\cos^2 x - 7\cos x = 4$

   p. $\cot^2 x - \cot x = 0$

3. Name the absolute value equation from the number line.

   a.
   

   b.
   

   c.
   

ANSWERS

1. -

a. $\frac{\pi}{6}, \frac{7\pi}{6}$

b. $\frac{\pi}{6}, \frac{5\pi}{6}$

c. $\frac{\pi}{6}, \frac{11\pi}{6}$

d. $\frac{3\pi}{4}, \frac{7\pi}{4}$

e. $\frac{3\pi}{2}$

f. $\frac{\pi}{2}, \frac{3\pi}{2}$

g. $\frac{5\pi}{4}, \frac{7\pi}{4}$

h. $\frac{5\pi}{4}, \frac{7\pi}{4}$

i. $\frac{4\pi}{3}, \frac{5\pi}{3}$

j. $\frac{\pi}{2}, \frac{3\pi}{2}$

k. $\frac{\pi}{2}, \frac{3\pi}{2}$

2.

a. $\frac{\pi}{4}, \frac{5\pi}{4}, \frac{\pi}{2}, \frac{3\pi}{2}$

b. $\frac{2\pi}{3}, \frac{4\pi}{3}$

c. $\frac{7\pi}{6}, \frac{11\pi}{6}, \frac{\pi}{2}$

d. $0, \pi, \frac{\pi}{2}$

e. π

f. $\frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$

g. $0, \frac{\pi}{3}, \frac{5\pi}{3}$

h. $\frac{\pi}{6}, \frac{\pi}{3}, \frac{7\pi}{6}, \frac{4\pi}{3}$

i. $\frac{\pi}{12}, \frac{5\pi}{12}, \frac{3\pi}{4}, \frac{13\pi}{12}, \frac{17\pi}{12}, \frac{7\pi}{4}$

j. $\frac{3\pi}{2}$

k. $\frac{\pi}{3}, \frac{5\pi}{3}$

l. $\frac{\pi}{2}, \frac{3\pi}{4}, \frac{7\pi}{4}$

m. $\frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$

n. $\frac{\pi}{3}, \frac{5\pi}{3}$

o. $\frac{2\pi}{3}, \frac{4\pi}{3}$

p. $\frac{\pi}{2}, \frac{3\pi}{2}, \frac{\pi}{4}, \frac{5\pi}{4}$

3. –

a. $|x-6| \le 3$

b. $|x-3| > 2\frac{1}{2}$

c. $|x-12| \ge 15$