What month is your birthday ?
What are the first 2 digits of your address ?
What are the last 2 digits of your zip code ?
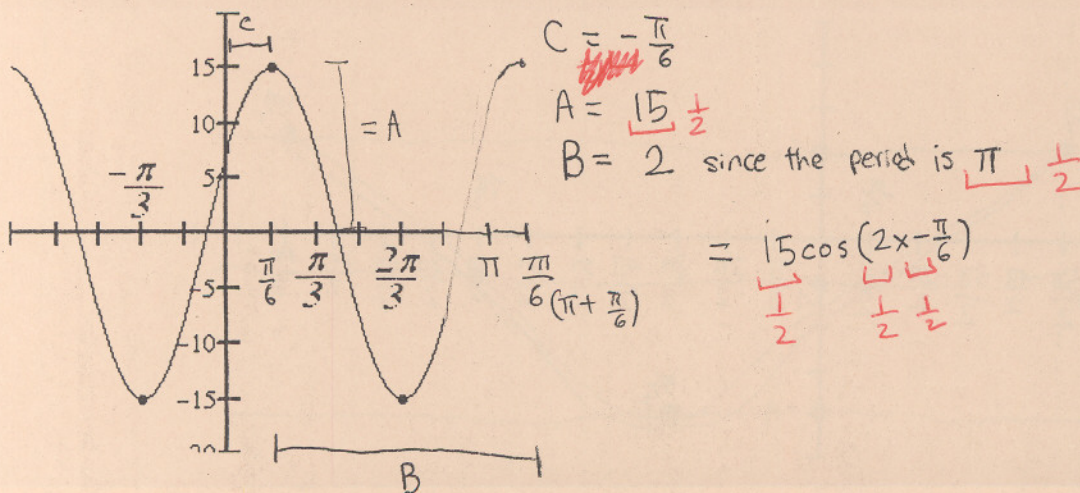What are the last 2 digits of your DeAnza ID number ?

$$\frac{1}{3} \quad \frac{2}{3}$$
$$\frac{5}{7} \quad \frac{1}{2}$$

SCORE: 26 / 30 POINTS

NO CALCULATORS ALLOWED

YOU MUST SHOW PROPER WORK TO RECEIVE FULL CREDIT

Graph one period of the function $y = 2 - \csc \dfrac{\pi}{4} x$. **SCORE: 10 / 10 POINTS**

Label the 5 important x − coordinates and 3 important y − coordinates on your graph as shown in class.
Draw your graph on the axes included below.

Amp = 1

Period = $\dfrac{2\pi}{\frac{\pi}{4}}$ = 8, $\dfrac{1}{4} 8 = 2$ $\frac{1}{2}$

Midline = 2

1 ASYMPTOTES
1 MAX/MIN
1 GRAPH

TOP
Midline
BOTTOM
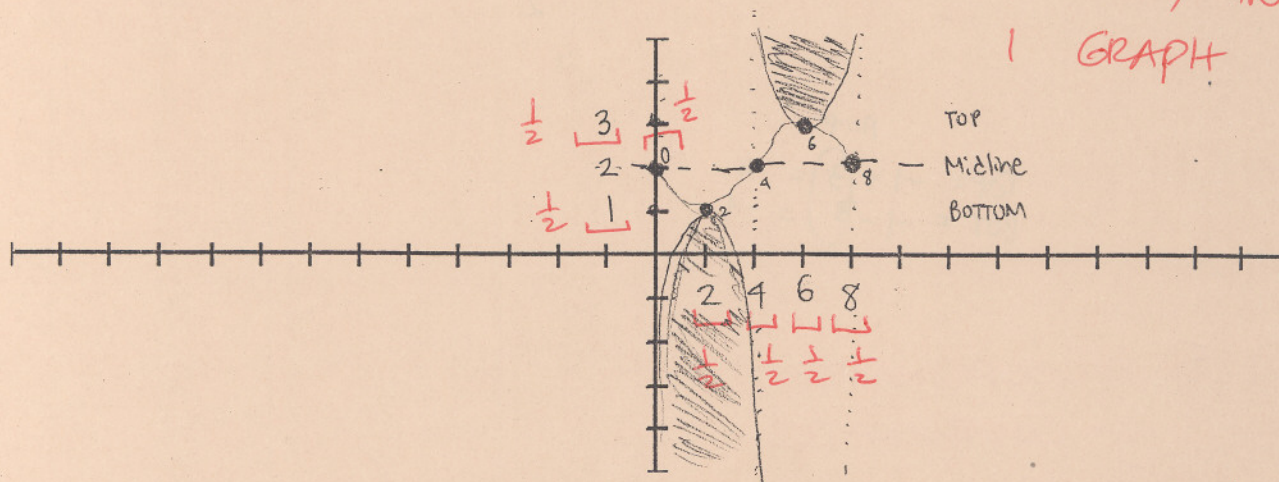
Find an equation of the form $y = A\cos(Bx + C)$ for the graph shown below.   **SCORE: $2\frac{1}{2}$ / 4 POINTS**

$C = -\dfrac{\pi}{6}$

$A = 15$ $\frac{1}{2}$

$B = 2$ since the period is π $\frac{1}{2}$

$= 15\cos\left(2x - \dfrac{\pi}{6}\right)$
  $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$

Fill in the blanks.   SCORE: $\frac{1}{2}$ / 4 POINTS

[a]   The **equations** of the asymptotes of $y = \csc x$ are $\underline{\quad 2\pi_x + n \quad\quad\quad\quad\quad}$.

[b]   The period of $y = \csc x$ is $\underline{\quad 2\pi, \frac{1}{2} \quad}$.

[c]   The **equations** of the asymptotes of $y = \tan x$ are $\underline{\quad \frac{\pi}{2} + n \quad\quad\quad\quad}$.

[d]   The period of $y = \tan x$ is $\underline{\quad \pi, \frac{1}{2} \quad}$. $\frac{1}{2}$
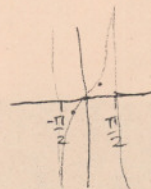
Graph one period of the function $y = 3\cos\left(\dfrac{x}{4} + \dfrac{5\pi}{8}\right) - 1$ using the procedure shown in class.   SCORE: 2 / 12 POINTS

Find all the relevant information (including labeling the 5 important $x-$coordinates and 3 important $y-$coordinates) as shown in class.
Draw your graph on the axes included below.

Midline = $-1, 1$ STARTING POINT = $\frac{x}{4} + \frac{5\pi}{8} = 0$

Amplitude = $3, 1$ $2x + 5\pi = 0$

Period = $\frac{2\pi}{1/4} = 8\pi, 1$ $5\pi = -2x$

                    $1/4 \; 8\pi = 2\pi$ $\frac{-5\pi}{2} = x, 1$

                                    $\frac{-5\pi}{2}$ 1st Pt

                    $\frac{-5\pi}{2} + 2\pi = \frac{-5\pi}{2} + \frac{4\pi}{2} = \frac{-\pi}{2}, \frac{1}{2}$

                    $\frac{-\pi}{2} + 2\pi = \frac{-\pi}{2} + \frac{4\pi}{2} = \frac{3\pi}{2}, \frac{1}{2}$

                              3

                                        Amp
TOP = $-1 + \boxed{3} = 2, \frac{1}{2}$

BOT = $-1 - \boxed{3} = -4, \frac{1}{2}$

I FOR 5 X-COORDINATES
I FOR 3 Y-COORDINATES
I FOR 5 DOTS
I FOR GRAPH