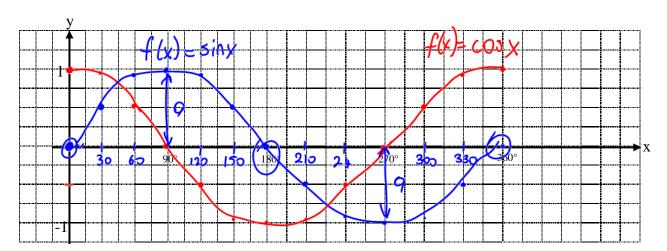
Chapter 5: Trigonometric Ratios

Date:__

Graphing $f(x) = \sin x$ and $f(x) = \cos x$

Complete the following table of values for $f(x) = \sin x$ and $f(x) = \cos x$ then plot each on the grid below.

X	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°	330°	360°
$f(x) = \sin x$	0	0.5	0.87	1	0.87	0.5	0	-0.5	-0.87	-1	-0.87	-0.5	0
$f(x) = \cos x$	1	0.87	0.5	0	-0.5	-0.87	-1	-0.87	-0.5	0	0.5	0.87	1



For the sine function: What is the period of the graph? What is the period of the graph? What is the amplitude of the graph? MQ - MI What is the amplitude of the graph? What are the x - intercepts? What are the x - intercepts? 0, 180, 360 What is the y_1 - intercept? What is the y - intercept? (ρ_{1}) What is the axis of the curve? Max + min What is the axis of the curve? y=0 b/c 1+(-1)=0 What are the max and min values? What are the max and min values? min =-/ max=1 min=-1 What is the domain? What is the range What is the domain? What is the range? D: { x & R } D: {x < PZ } R: {y < PZ | ' When is the graph increasing? When is the graph increasing? 0 (x (90) 17 (x (36) 1805 x 6360 When is the graph decreasing? When is the graph decreasing? 906 x 6210 O (X (180 Explain why this graph is a function

THINKING: Compare the graphs of $y = \sin x$ and $y = \cos x$. How are they the same? How are they different?

Similorities Deciodic

- same period

- same equation of the axis y=0 - some amplitude

Explain why this graph is a function

Passes the ULT, and there is one y

UDIUC for every K

.. The sine & cosine function are congruent Sinusoidal curves; the cosine curve is is the sine curve translated 90° to the left. co 5K = sin(x+90)

g values will repeat if we extend point 365

For the cosine function:

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