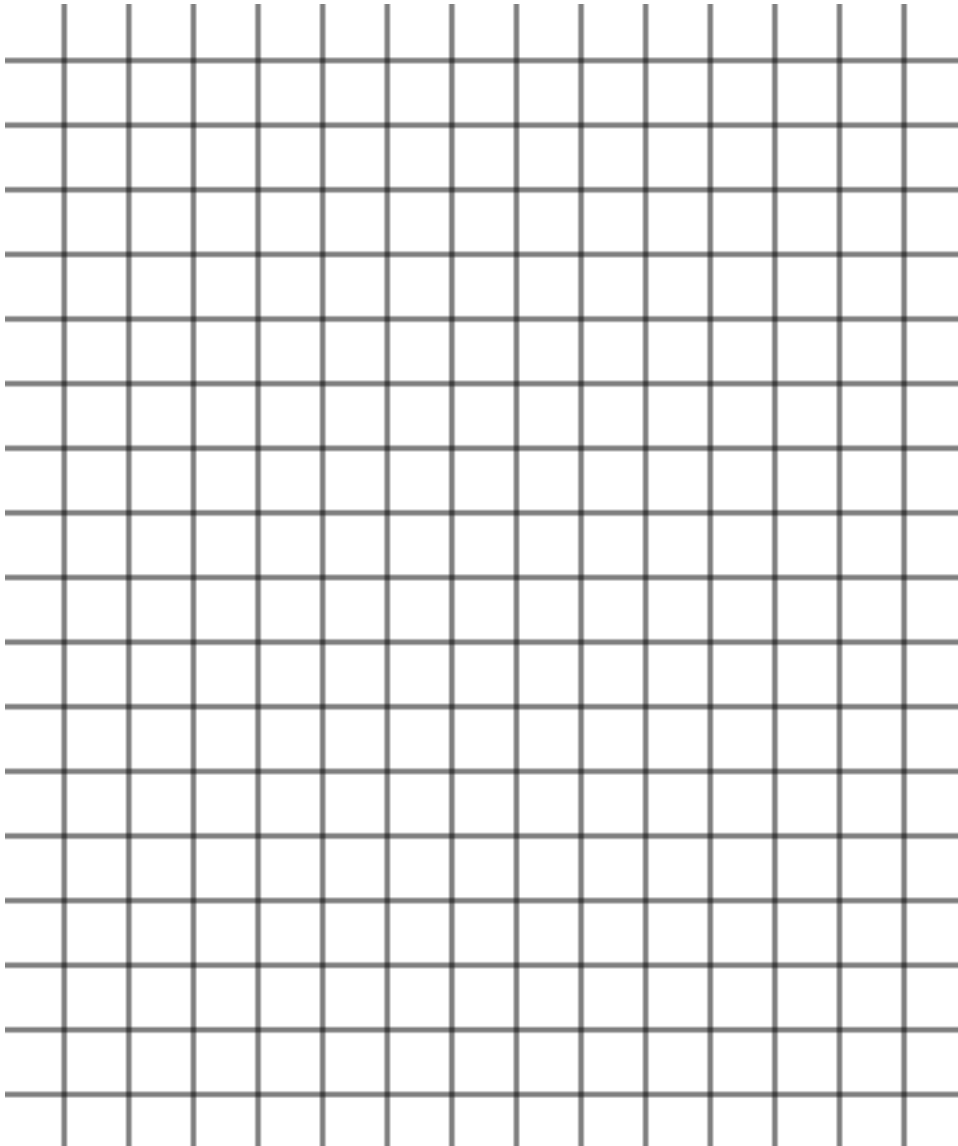


MAT119 Test 2 (Fall 2012):

Name:

Directions: All problems are equally weighted. Show your work! Answers without justification will likely result in few points. Your written work also allows me the option of giving you partial credit in the event of an incorrect final answer (but good reasoning). Indicate clearly your answer to each problem (e.g., put a box around it). **Good luck!**

Problem 1. Sketch the graph of $(x + 2)^4 - 16$ by transforming the graph of x^4 . Describe the transformations used, and indicate all x - and y -intercepts on the graph.



Problem 2. Find the slant asymptote of the function $r(x) = \frac{x^2 - 4x - 5}{x - 3}$.

Problem 3. Find the following:

a. The angle measure of $\frac{\pi}{5}$ in degrees.

b. The angle measure of 37 degrees in radians.

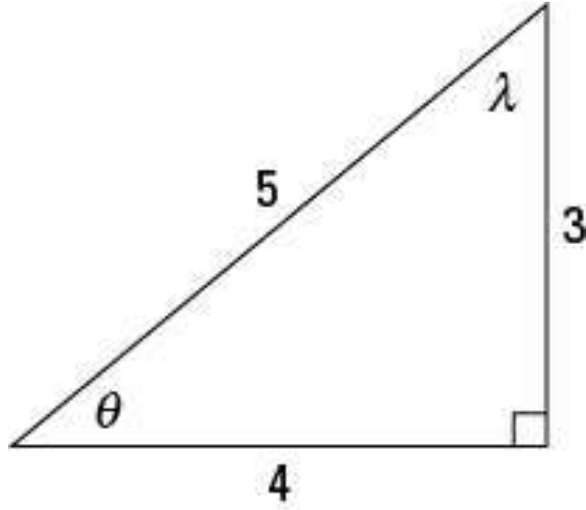
c. The reference angle for $\frac{3\pi}{4}$.

d. Two different angles coterminal with $\frac{\pi}{3}$.

e. $\sin^{-1}\left(\sin\left(\frac{2\pi}{3}\right)\right)$ (and explain!)

Problem 4.

- a. Find the exact values of the six trigonometric functions of θ :



- b. Find the values of the trig functions of x , given that $\tan(x) = -\frac{3}{4}$, $\cos(x) > 0$. (Draw!)

Problem 5. Solve for the following triangle: $a = 10$, $b = 12$, $c = 16$

Problem 6. Solve for the following triangle: Angle $A = 43.1^\circ$, $a=186.2$, and $b=248.6$.