

Name \_\_\_\_\_

“Are You Ready For Calculus” Worksheet

Answer these 12 Questions. They represent some of the Pre-Calc and Math B knowledge needed for this course.

1) Simplify:  $\frac{4 - x^{-2}}{2 + x^{-1}}$

2) Simplify  $\sqrt{27a^3b^5}$

3) Solve for x:  $\log_5 x = 3$

4) Solve for c:  $2a + 2bc = b - ac$

5) Factor:  $27y^3 - 8$

6) Find the exact value:

a.  $\cos 60$

b.  $\tan 135$

c.  $\sin^{-1} \left( \frac{\sqrt{3}}{2} \right)$

d.  $\tan^{-1} \left( \frac{-1}{\sqrt{3}} \right)$

7) Find the remainder using synthetic division:

$$x^3 - 2x^2 - 13x - 10 \div x + 2$$

8) Write the equation of the line passing through (-1,2) and (4,6)

9) Simplify  $\frac{f(x+h) - f(x)}{h}$  when  $f(x) = 3x + 1$

10) Solve for A:  $V = 2(AB + BC + CA)$

11) Evaluate:

a.  $\log(x - 1) = 1$

b.  $\log_5(r + 2) + \log_5(r - 2) = 1$

12) Find the inverse of  $f(x) = 3x + 2$