Atmospheric Sciences 101 Math Assessment

This is only for helping me design the homeworks/quizzes. NO CALCULATORS. No name needed.

Your High School _____ City and State of your HS_____

1. Arithmetic

(a) $\frac{1}{0.1}$ =   10   **74%**

(b) 2^3 =   8   **91%**

(c) $64^{1/2}$ =   8   **64%**

(d) 2^{-2} =   1/4   **48%**

(e) $\frac{25*10^3}{5*10^{-5}}$ = 5×10^8 **25%**

(f) 231/7 =   (no calculator, to the tenths place)   **33 57%**

2. Express in scientific notation

(a) .00012 1.2×10^{-4} **58%**

(b) 300,000 3×10^5 **70%**

3. Geometry and Trigonometry

(a) The formula for the area of a circle is: πr^2 **57%**

(b) Using the diagram at the right, cos α =   **53%**

a/b, b/a, (a/c), d/a. b/c, c/b (circle the right answer)
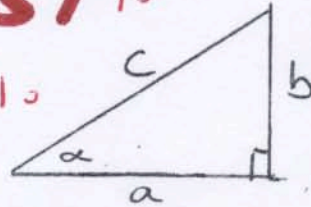
4. Algebra

(a) PV=nRT; solve for T. $\frac{PV}{nR} = T$ **87%**

(b) y= x/(1-x); solve for x

$y(1-x) = x$
$y - xy = x$ $y = xy + x$ $x = \frac{y}{y+1}$
    $y = x(y+1)$ **14%**

(c) a/x =b/c; solve for x in terms of a, b, c

$\frac{a}{x} = \frac{b}{c}$ $ac = bx$ **51%**
    $\frac{ac}{b} = x$