PRACTICE EXAM 2

1. $473. \times 10^{-2}$ $\quad 4.73 \times 10^{0}$ **b.**

2. 3.45×10^{1}
-2.37×10^{2}

BY HAND

0.345×10^{2}
-2.37×10^{2}

$-2.025 \times 10^{2} \Rightarrow -2.03 \times 10^{2}$ **d.**

3. $a^{3} + a^{-3} = a^{-4}(\quad + \quad)$

$\frac{a^{3}}{a^{-4}} + \frac{a^{-3}}{a^{-4}} = \frac{a^{-4}}{a^{-4}}(\quad + \quad)$

$a^{3-(-4)} + a^{-3-(-4)} = (\quad + \quad)$

$a^{7} + a^{1} = (a^{7} + a)$ **c.**

4. $xy - 3x = x(\quad - \quad)$

$x(y-3)$ **b.**

5. $2 \cdot \log(x) = 6$

(1st: 2; 2nd: log(x))

$\frac{2 \cdot \log x}{2} = \frac{6}{2}$ ←

$\log x = 3$

$10^{\log x} = 10^{3}$ ←

$x = 1000$ **b.**

6. $y^{4/3} = 5$

$(y^{4/3})^{3/4} = (5)^{3/4} = (5)^{0.75}$ ←

$y = 3.34$

d.

7. $3\tan x + 5 = 2$

2nd 3rd 1st

$3\tan x + 5 = 2$

$-5 \quad -5$ ←

$\frac{3\tan x}{3} = \frac{-3}{3}$ ←

$\tan x = -1$

$\tan^{-1}(\tan x) = \tan^{-1}(-1)$ ←

$x = -45°$

c.

8. $-2x^2 - 3x + 4 = 0$

→ $a = -2 \quad b = -3 \quad c = 4$

$x = \frac{-(-3) \pm \sqrt{(-3)^2 - 4(-2)(4)}}{2(-2)}$

b.

1st 2nd

9. $2 * 10^x = 20$

$\frac{2*10^x}{2} = \frac{20}{2}$ ←

$10^x = 10$

$\log(10^x) = \log(10)$

c.

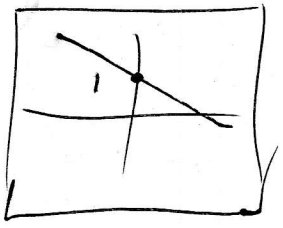
$x = 1$

10. $e^{x^2} = 54.6$ $\quad LN(e^{x^2}) = LN(54.6)$ ←

$x^2 = 4$

$\sqrt{x^2} = \sqrt{4}$ ←

$\boxed{x = 2}$ $\quad \boxed{b.}$

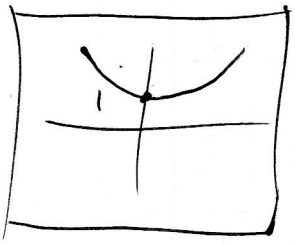
11. 

$a < 0$

$b = 1$

$y = ax + b$

$\boxed{c.}$ $y = -0.5*x + 1$

12. 

$a > 0$

$c = 1$

$y = ax^2 + bx + c$

$\boxed{d.}$ $y = x^2 + 1$