1. Enter $6.7(3.23)^{4.27}$ into calculator

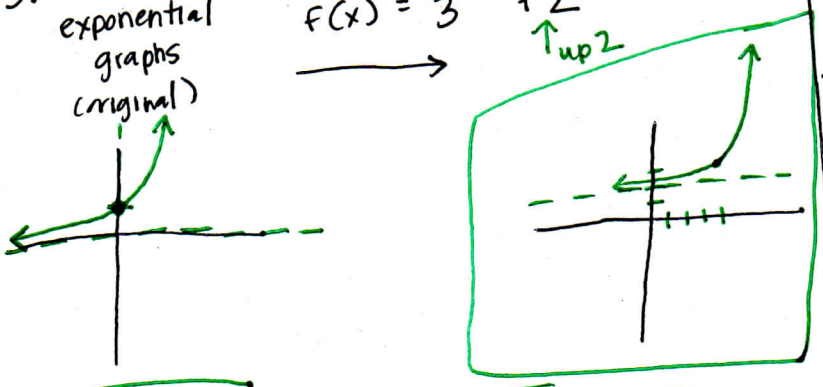
$= \boxed{1000.851}$

2. $g(23) = 425.5e^{.4966(23)}$ (use calculator)

$= \boxed{38844029.73}$

3. exponential graphs (original)

$f(x) = 3^{x-4} + 2$ → right 4, up 2

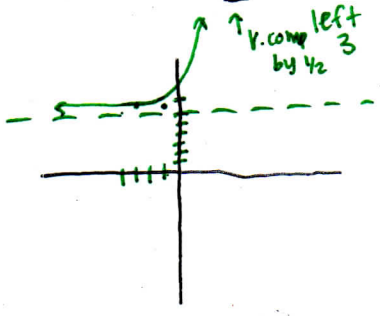


D: $(-\infty, \infty)$

R: $(2, \infty)$

H.A.: $y = 2$

4. $f(x) = \frac{1}{2}e^{x+3} + 6$ → up 6



D: $(-\infty, \infty)$

R: $(6, \infty)$

H.A: $y = 6$

y-int: plug 0 in for x

$y = \frac{1}{2}e^{0+3} + 6$

solve in calc.

$y = 16.043$

5. $P = 3000$

$r = .08$ (8%)

$n = 4$ (quarterly)

$t = 14$ years

$A = 3000\left(1 + \frac{.08}{4}\right)^{4 \cdot 14}$

$= \$9093.50$

↑ total in account after 14 years

6. $5^7 = 78125$

7. $\log_3 1594323 = 13$

8. $\log_6 6^{-3} = x$ change forms

$6^x = 6^{-3}$

$\boxed{x = -3}$

9. $\log_{2^4} 2^3 = x$ change form

$(2^4)^x = 2^3$

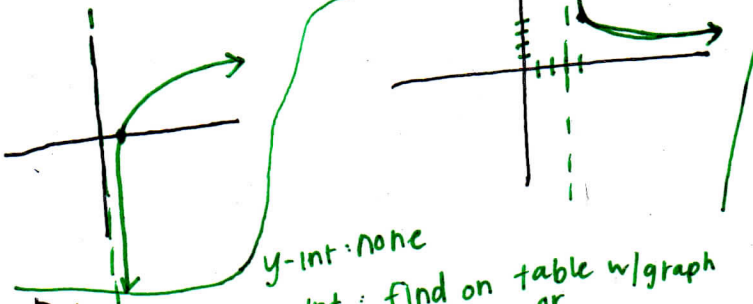
$2^{4x} = 2^3$

$4x = 3$

$\boxed{x = 3/4}$

10. log graphs (original)

$f(x) = -\ln(x-3) + 4$ → reflect over x, right 3, up 4



D: $(3, \infty)$

R: $(-\infty, \infty)$

V.A: $x = 3$

y-int: none

x int.: find on table w/graph or plug zero in for y

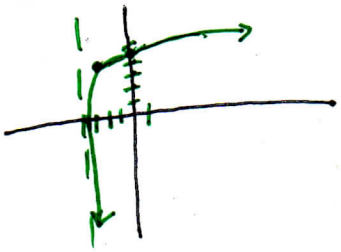
$0 = -\ln(x-3) + 4$

$4 = \ln(x-3) \rightarrow e^4 = x - 3$

$e^4 + 3 = x$

$\boxed{x = 57.6}$

11. $f(x) = \log_5(x+4) + 4$ → left 4, up 4



HA: none

D: $(-4, \infty)$

R: $(-\infty, \infty)$

V.A: $x = -4$

x-int: $0 = \log_5(x+4) + 4$

$-4 = \log_5(x+4) \rightarrow 5^{-4} = x+4$

$5^{-4} - 4 = x$

$x = -3.9993$

y-int: plug zero for x

$y = \log_5(0+4) + 4$

$y = \log_5(4) + 4$

$y = 4.86$

12. plug into calc. $\frac{\log_{10}(19)}{\log_{10}(6/5)}$

$= \boxed{16.15}$