4] WA 4 21/21

34) 2^{43} +1

36) 5^{-7} +1

Or equivalent answers, as long as it is simplified.

38) $\frac{3^{24} \cdot 3^{-2}}{3^{10}} = 3^{12}$ +1

40) $11^{2/3}\sqrt{11} = 11^{2/3} \cdot 11^{1/2} = 11^{2/3+1/2} = 11^{7/6}$ +1

2]

10) (0,5) and (3,2) find exp. fnctn.

+5 1/5 know $a = 5$ in $f(t) = a\,b^t$.

Then $f(3) = 5 \cdot b^3 = 2$

$b^3 = \frac{2}{5}$

$b = \left(\frac{2}{5}\right)^{1/3}$

work +1

$\Rightarrow f(t) = 5\left(\frac{2}{5}\right)^{t/3}$ +4

3]

12) Same problem. (3, 22) and (7, 5).

5/5 $f(t) = a\,b^t$

$a\,b^3 = 22$

$a\,b^7 = 5$

+1 for work

$\frac{a\,b^7}{a\,b^3} = \frac{5}{22}$

$b^4 = \frac{5}{22}$

$b = \left(\frac{5}{22}\right)^{1/4} \approx 0.69$

$a \cdot \left[\left(\frac{5}{22}\right)^{1/4}\right]^3 = 22$

$a = \left(\frac{22}{5}\right)^{3/4} \cdot 22 \approx 66.8$

So $f(t) = 66.8 \cdot (0.69)^t$ +4

4] 3/3

34) $P(t) = ab^t$ $\quad r = 0.018 \quad (1.8\%)$

$a = 250$

So $\quad b = 1 + 0.018 = 1.018$

$$P(t) = 250\,(1.018)^t$$ +3

5] 34) $V = V_0\left(1 + \frac{r}{n}\right)^{nt}$

4/4

$V = 36{,}000$

$t = 9$

$n = 4$

$r = 0.008$

Solve for V_0.

$$36 = V_0 \cdot \left(1 + \frac{0.008}{4}\right)^{4 \cdot 9}$$

$$36 = V_0\,(1.002)^{36}$$

$$V_0 = 33.502$$

or $\$33{,}502$ +3

Work +1