

Pg. 708 #8, 9, 12-10 even, 23-26, 31 ^{24b.}

8) $N = N_0(1+r)^t$

$N = 3750(1-0.25)^2$

$\boxed{\$2109.38}$

9) a. $9145219 - 8863052 = 282167 / 7 = 40309.57 \leftarrow \text{amt} \uparrow \text{ each year}$

$40309.57 / 8863052 = 0.0045$

$\boxed{0.45\%}$

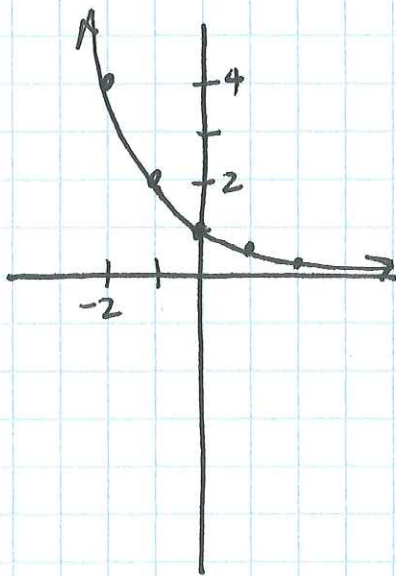
b. $N = N_0(1+r)^t$

$N = 9145219(1+0.0045)^{13}$

$= \boxed{9,695,766}$

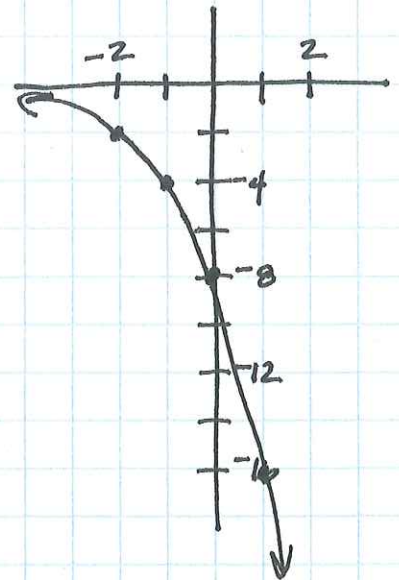
(2)

x	y
-2	4
-1	2
0	1
1	1/2
2	1/4



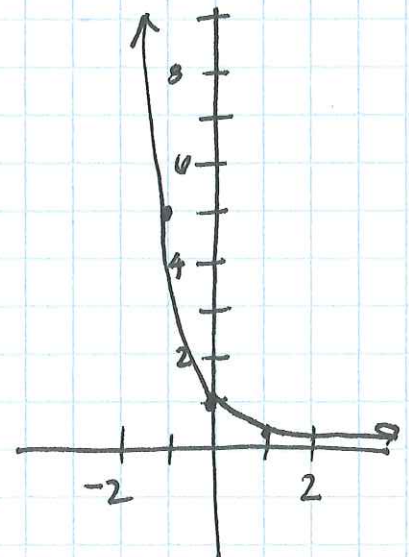
(4)

x	y
-2	-2
-1	-4
0	-8
1	-16
2	-32



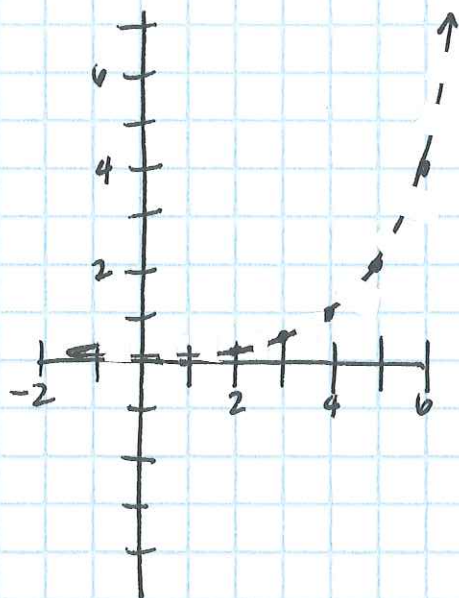
(6)

x	y
-2	25
-1	5
0	1
1	1/5
2	1/25



18)

x	y
-2	0.015625
-1	0.03125
0	0.0625
1	0.125
2	0.25
3	0.5
4	1
5	2
6	4



23) a. The graph shifts up 4 units
of $y = 6^x + 4$

b. The graph of $y = 3^x$ is a reflection of the x-axis
(it is flipped over the x-axis)

c. The graph of $y = 7^{-x}$ is a reflection over the y-axis
(it is flipped over the y-axis)

d. The graph of $y = \left(\frac{1}{2}\right)^x$ is a reflection over the y-axis
(it is flipped over the y-axis)

24) b. $y = 9.25(1.06)^{30}$
\$170,400

$$25) a. y = (1 - 0.15)^x$$

$$\boxed{y = (0.85)^x}$$

x

$$c. y = (0.85)^{12}$$

$$\boxed{\sim 14\%}$$

d. No, the graph will never cross or reach the x-axis, so the % of impurities, y, will never reach 0.

$$26) a. N = N_0(1+r)^t$$

$$= 876156(1+0.0074)^{15}$$

$$= \boxed{978,612}$$

$$b. N = N_0(1+r)^t$$

$$= 2465326(1+0.0053)^{15}$$

$$= \boxed{2,668,760}$$

$$c. 152307 - 139510 = 12797/10 = 1279.7/139510 = 0.0092$$

$$N = 152307(1+0.0092)^{15}$$

$$= \boxed{174,664}$$

$$31) a. A = P(1 + \frac{r}{n})^{nt}$$

$$1000(1 + \frac{0.05}{1})^1$$

$$1050 \text{ (\$50)}$$

$$1000(1 + \frac{0.05}{2})^{2(1)}$$

$$\$1050.63 \text{ (\$50.63)}$$

$$1000(1 + \frac{0.05}{4})^{4(1)}$$

$$1050.95 \text{ (\$50.95)}$$

$$1000(1 + \frac{0.05}{12})^{12(1)}$$

$$1051.16 \text{ (\$51.16)}$$

$$1000(1 + \frac{0.05}{365})^{365(1)}$$

$$1051.27 \text{ (\$51.27)}$$

$$b. 1000(1 + \frac{0.051}{1})^{1(1)}$$

$$\$1051$$

$$1000(1 + \frac{0.0505}{12})^{12(1)}$$

$$\$1051.69$$

$$c. 1000(1 + \frac{0.05}{1})^1 = 1000(1 + \frac{x}{365})^{365}$$

$$1050 = 1000(1 + \frac{x}{365})^{365}$$

$$x = 4.88\%$$

$$1000(1 + \frac{0.05}{365})^{365(1)}$$

$$\$1051.27$$

Money Market

$$d. 191701 - 168767 = 22934/10$$

$$191701(1+0.0136)^{15}$$

$$\boxed{234722}$$

$$= \frac{2293.4}{168767}$$

$$= 0.0136$$