**Name: Period: Job 22 Transformations of Exponential Functions**

**Part 1: Textbook**

Textbook Lesson 6-5 Page 250: 19, 21, 23, 24, 25

**Part 2: Algebra Regents Questions –**



**Graph Question 25 here**

1. Jacob and Jessica are studying the spread of dandelions. Jacob discovers that the growth over $t$ weeks can be defined by the function $f\left(t\right)=\left(8\right)∙2^{t}. $ Jessica finds that the growth function over $t$ weeks is $g\left(t\right)=2^{t+3}$. Calculate the number of dandelions that Jacob and Jessica will each have after 5 weeks.

Based on the growth from both functions, explain the relationship between $f(t)$ and $g(t)$.

1. Which function is shown in the table below?





 (1) $f\left(x\right)=3x$

 (2) $f\left(x\right)=x+3$

 (3) $f\left(x\right)=-x^{3}$

 (4) $f\left(x\right)=3^{x}$

1. The graph of $y=f(x)$ is shown below.

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What is the graph of $y=f\left(x+1\right)-2$?

 (1) (3)



 (2) (4)

****4. Draw the graph of $y=\sqrt{x-1}$ on the set of axes below.