

**Week 30: 3/21-/25 Math I**

**Due: 3/29**

**Objectives:**

1. To simplify expressions involving zero and negative exponents.
2. To evaluate and graph exponential functions.
3. To compare properties of linear and exponential functions.
- 4.

**Monday:**

**In Class:**

**Section 5-1: #1-8**

**Homework:**

**Section 5-1: #9-32**

**EXTRA CREDIT IF YOU DO #36-41**

**Tuesday:**

**In Class:**

**Section 5-2: #1-4**

**In Class Activity**

**Homework:**

**Section 5-2: #11-28**

**Wednesday:**

**Homework:**

**Go to text website: [www.pearsonsuccessnet.com](http://www.pearsonsuccessnet.com)**

**Click on section 5-3 and WATCH online problems 1-3 and complete "Got It's" that follow.**

**THESE WILL BE CHECKED THURSDAY FOR COMPLETION OR POINTS WILL BE DEDUCTED.**

**Thursday:**

**In Class:**

**Section 5-3: #1-6**

**In Class Activity**

**Homework:**

**Section 5-3: #7-10, 12-15**

**Complete In Class Activity**

**Friday:**

**Homework:**

**None. Enjoy your 4-day weekend.**

**No Class on Monday due to a holiday.**

**This packet will be due next Tuesday.**

5-3  
In class for  
Finish for  
HW.

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## Enrichment

### Comparing Linear and Exponential Functions

Comparing linear and exponential functions is a powerful tool for working with money.

A designer has developed a social networking Web site that has drawn the attention of two investment groups. Both groups have agreed to let the designer work for the company after the rights to the Web site are sold. The designer is not sure which offer to accept. The initial buyout offerings and yearly compensations are listed below:

**Investment Group A:** first year \$150,000 with an annual increase of \$100,000

**Investment Group B:** first year \$150,000 with an annual increase of 20%

1. Use the information given to compare annual compensation for the first five years. Round to the nearest dollar.

Year	Initial Buyout	1	2	3	4	5
Investment Group A	\$150,000					
Investment Group B	\$150,000					

2. At first glance, which offer appears to be best for the designer? Why?
3. Write formulas for each offer that would allow you to determine the amount of the designer's compensation in any year  $x$ .
4. Calculate the compensations for Year 12 to the nearest dollar. How does the difference in compensations for Year 5 compare to the difference in Year 12?
5. Use your calculator to set the equations you found in part (3) equal to each other, and solve for  $x$  to the nearest thousandth. Interpret the result in terms of the situation. What do you predict will happen as  $x$  increases?
6. Calculate the compensations for Year 20 to the nearest dollar. What is the difference in salaries? Why do you think the difference is so much greater than in Year 5?
7. How would you advise the designer?