M1 Summary Assignment - Unit 6
Exponential Functions

1. Looking at the table, determine if it represents an exponential growth, exponential decay or linear function

a)

x	-2	-1	0	1	2
y	-3	0	3	6	9

b.

x	0	1	2	3	4
y	9	18	36	72	144

2. Are these equations representing linear, exponential growth, exponential decay, or none of these?

a. $y = 3x^5$ b. $y = 3x + 5$ c. $y = 3(5)^x$

3. Graph these functions by completing the table.

a. $y = 2 \cdot 5^x$

x	y
-1	
0	
1	
2	

b. $y = 3 \cdot 2^x$

x	y
-1	
0	
1	
2	

4. Solve these equations

a. $8^{3x} = 8^{x+7}$ b. $25^x = 5^{x+9}$

5. Write an exponential function for each situation:

a. A population of 250,000 increases by 5% each year.

b. An item costs $45, and the price drops by 3% each year.

6. Write an exponential function for each set of data

a.

x	-1	0	1	2	3
y	.75	3	12	48	192

b.

x	0	1	2	3	4
y	8	24	72	216	648

7. Remember to continue considering all the topics we have reviewed on the worksheets.