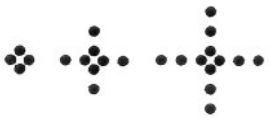
Algebra I
Ch. 1 Review

NAME:_____
DATE:_____ HOUR:____

8

Find the next two terms in each sequence.

1. 

2. 4, 7, 10, 13, _____ , _____

3. Use the *n*th term to list the first five terms of the sequence. Show your work.

$a_n = 3n + 5$

a_1 = _____ = _____

a_2 = _____ = _____

a_3 = _____ = _____

a_4 = _____ = _____

a_5 = _____ = _____

Use the sequence below to answer Questions 4 through 6.

4. Complete the table by filling in the number of triangles in each term of the sequence.

Term n	1	2	3	4	5
Number of triangles					

5. Write an expression showing the relationship between the term and the number of triangles in that term. Let *n* represent the term.

6. Use the expression from Question 5 to find the 10th term of the sequence. Show your work.

7. Write the power as a product.

5^6

8. Write the product as a power.

3(3)(3)(3)(3)(3)(3)(3)(3)(3)

9. Perform the indicated operations. Show your work.

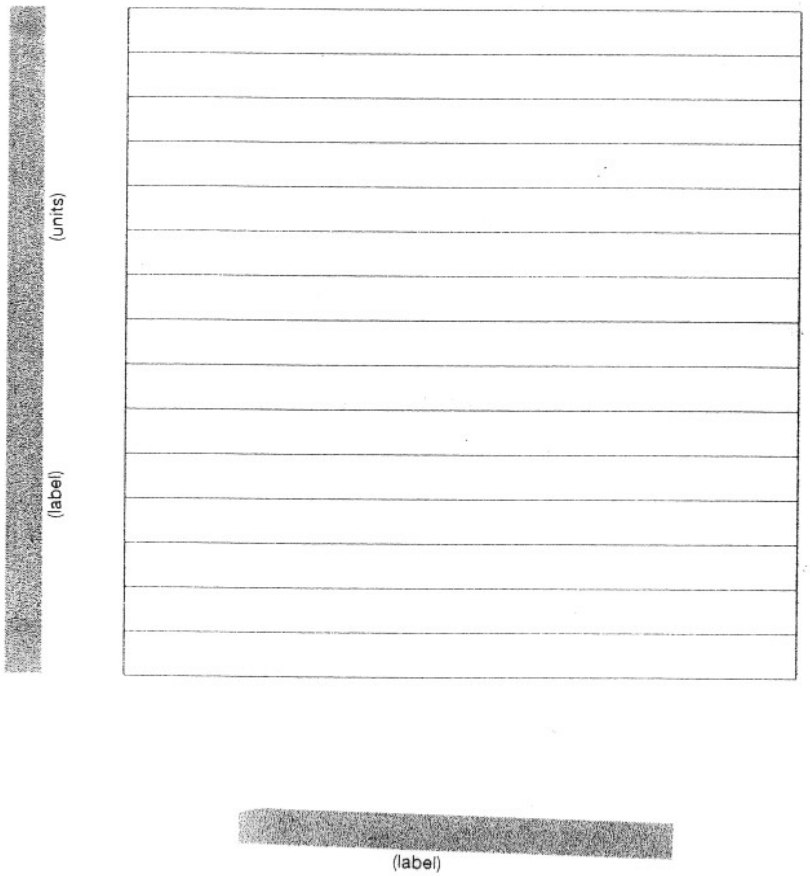
$(2 + 1)^3 - 5(2)$

Read the scenario below. Use the scenario to answer Questions 13 through 16.

A local ballet company is selling tickets for their upcoming performances of Swan Lake. The company earns a profit of $8 on each ticket they sell. The first week that tickets are on sale, they sold 30 tickets on Monday, 27 on Tuesday, 18 on Wednesday, 6 on Thursday, and 41 tickets on Friday.

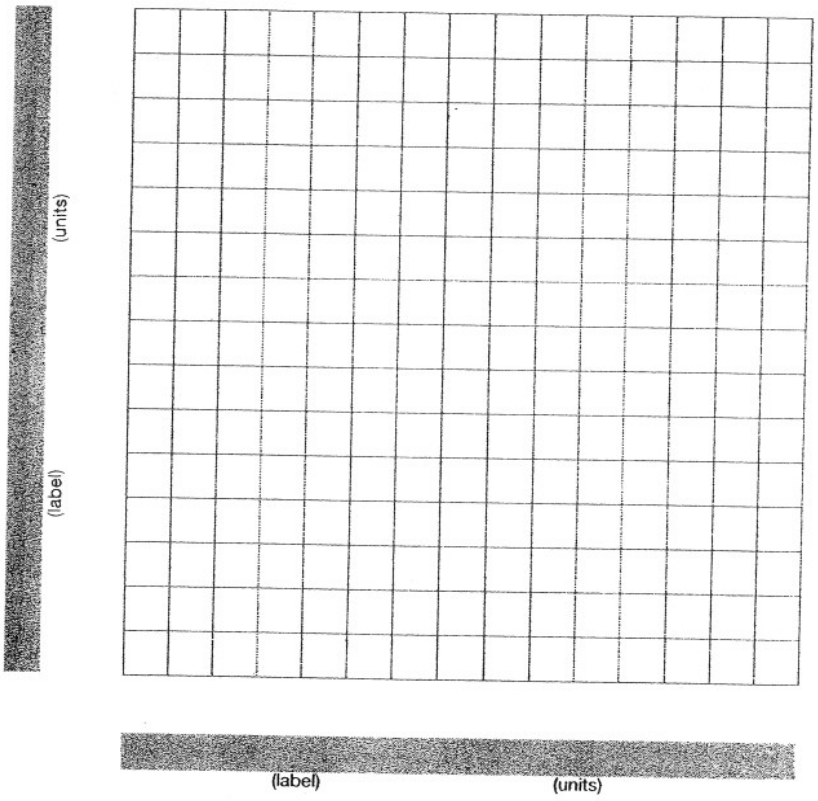
13. Make a table to show the number of tickets sold each day during the first week and the profit made on each of those days.

14. Create a bar graph to display the profit for each day of ticket sales in the first week.



15. Create a graph to display the relationship between the number of tickets sold and the profit. First, choose your bounds and intervals. Be sure to label your graph clearly.

Variable quantity	Lower bound	Upper bound	Interval
Number of tickets	0		3
Profit (dollars)	0		25



16. Write an algebraic equation that you could use to show the profit for any number of tickets sold.

P

n

Read the scenario below. Use the scenario to answer Questions 17 and 18.

The director of the local ballet company needs to print the programs for Swan Lake. Janet's Print Shop charges $.25 a program plus a $35 set-up fee. The Printing Press charges $.18 a program plus a $50 set-up fee.

17. Which printing company offers the better deal if 200 programs are printed? Show your work and use complete sentences to explain your answer.

Read the scenario below. Use the scenario to answer Questions 17 and 18.

The director of the local ballet company needs to print the programs for Swan Lake. Janet's Print Shop charges $.25 a program plus a $35 set-up fee. The Printing Press charges $.18 a program plus a $50 set-up fee.

18. Which printing company offers the better deal if 300 programs are printed? Show your work and use complete sentences to explain your answer.

19. T-Shirts & More Print Shop will print any image on a Frisbee for a cost of $2 per Frisbee and a one-time charge of $12 to set up the Frisbee design. Which algebraic equation shows the cost C of printing f Frisbees?

a. $C = 2f$

b. $C = 12f + 2$

c. $f = 2C + 12$

d. $C = 2f + 12$

20. T-Shirts & More Print Shop will print any image on a Frisbee for a cost of $2 per Frisbee and a one-time charge of $12 to set up the Frisbee design. You Say It, We Print It will print any image on a Frisbee for a cost of $5 per Frisbee and no set-up fee. Which statement is true?

a. You Say It, We Print It is a better buy if you purchase more than four Frisbees.

b. T-Shirts & More Print Shop is always the better buy.

c. You Say It, We Print It is always the better buy.

d. T-Shirts & More Print Shop is the better buy if you purchase more than four Frisbees.

Show your work.

Number of Frisbees Purchased	"T-Shirts and More Print Shop"	"You Say It, We Print It"
frisbees	$	$
f	2f+12	5f
2		
3		
4		
5		
6		