

Algebra IA
Ch. 1 Quiz Review

NAME: _____

DATE: _____ HOUR: _____

1.1, 1.2, 1.3, 1.6

1. Which choice shows the next two terms in the sequence?

1, 101, 2, 102, 3, 103, ...

- a. 4 and 140
- b. 4 and 401
- c. 4 and 104
- d. 4 and 114

2. Which statement describes the pattern?

-1, 10, -100, 1000, ...

- a. Start with the previous term, and multiply by 10 to get the next term
- b. Start with the previous term, and add a zero to get the next term
- c. Start with the previous term, and multiply by 100 to get the next term
- d. Start with the previous term, and multiply by -10 to get the next term.

3. Draw the next two terms in the sequence. (hint: the first term has two smiles and an arrow)



term 1



term 2

term 3

term 4

4. Simplify $5^2 - (3 + 6) + \frac{14}{7}$

Simplify $4(5 - 2) + 3^3 - (8 + 4)$

5. Write the acronym for the order of operations and identify what each letter represents.

Write each power as a product.

6. 7^4

7. 12^6

Write each product as a power.

8. $15(15)(15)(15)$

9. $6(6)(6)(6)(6)$

Evaluate each expression for the given variable. SHOW YOUR WORK.

10. Evaluate $2r + 8$ when r is 10.

11. Evaluate $\frac{t}{4}$ when t is 32.

12. Use the n th term to list the first FIVE terms of the sequence. Show your work.

$$a_n = 20 - 2n$$

$$a_1 = \underline{\hspace{2cm}} = \underline{\hspace{1cm}}$$

$$a_2 = \underline{\hspace{2cm}} = \underline{\hspace{1cm}}$$

$$a_3 = \underline{\hspace{2cm}} = \underline{\hspace{1cm}}$$

$$a_4 = \underline{\hspace{2cm}} = \underline{\hspace{1cm}}$$

$$a_5 = \underline{\hspace{2cm}} = \underline{\hspace{1cm}}$$

Read the scenario below. Use the scenario to answer question 13.

A local college has decided to build new sidewalks to connect the main administration building to the other buildings on campus. They can only build two new sidewalks a month. The diagrams show the number of sidewalks that have been built after 1, 2, and 3 months.



13. Complete the table for the number of sidewalks for each month then write an expression to represent the problem. (Use m for months).

Number of months (m)	1	2	3	4	5	6
Number of sidewalks						

Expression: _____

14. Write the expression for the n th term of the following sequence.

Term (n)	1	2	3	4	5
sequence	16	13	10	7	4

15. Write the expression for the n th term of the following sequence.

Term (n)	1	2	3	4	5
sequence	2	10	18	26	34

16. Write the expression for the n th term of the following sequence.

Term (n)	1	2	3	4	5
sequence	6	13	20	27	34

17. James earns \$7.30 an hour at work. Write the algebraic equation that shows the amount of money m that James earns in h hours.

Equation: _____

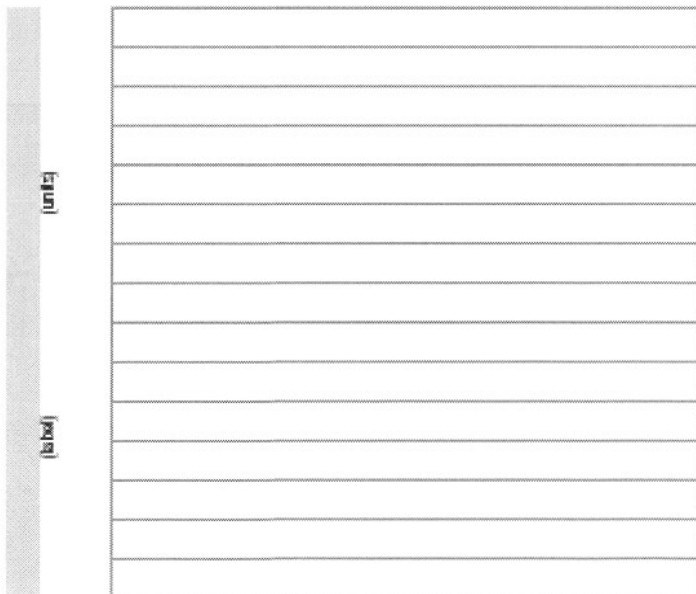
Read the scenario below. Use the scenario to answer questions 18 – 21.

The student council is selling t-shirts for homecoming to raise money for the school dance. The club earns \$4 for every t-shirt they sell. The number of t-shirts sold each week for the five-week sale is 19, 20, 11, 32, and 40.

18. Complete the table to show the number of t-shirts sold AND the profit made for EACH week of the sale.

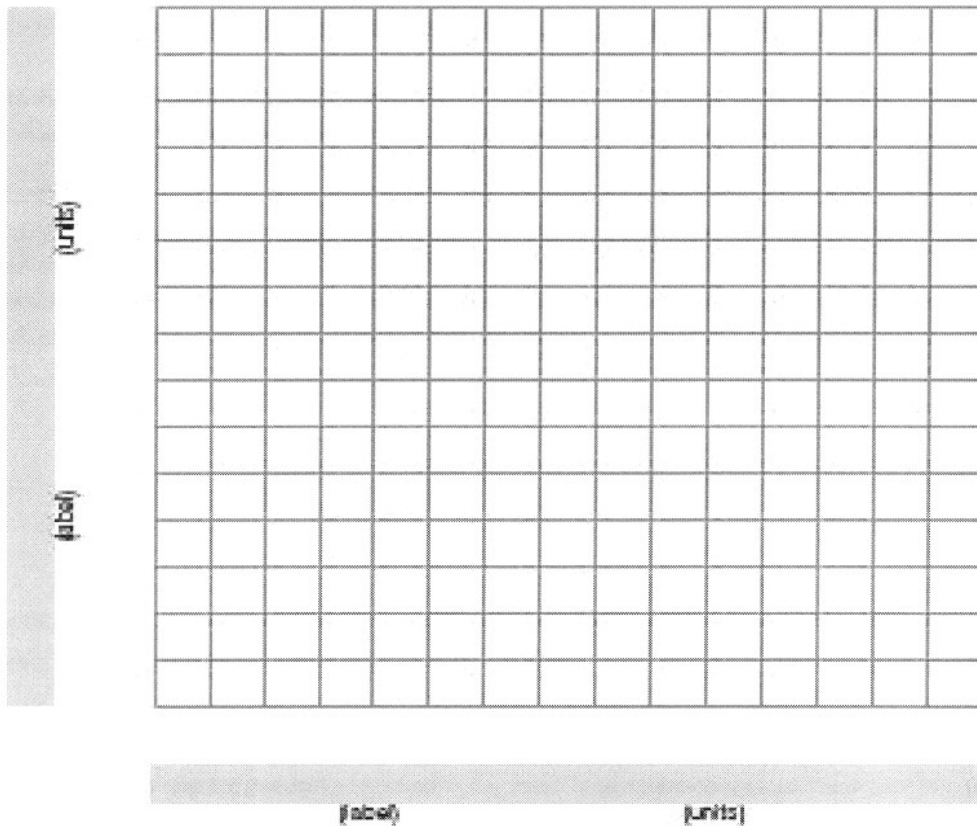
Week 1		
Week 2		
Week 3		
Week 4		
Week 5		

19. Create a bar graph to display the **profit** for each week of the sale. (*Don't forget a title.*)



20. Create a graph to display the relationship between the number of t-shirts sold and the profit. First, choose your bounds and intervals. Be sure to label your graph clearly. (*Don't forget a title.*)

Variable quantity	Lower Bound	Upper Bound	Interval
Number of t-shirts	0		5
Profit	0		20



21. Write an **algebraic equation** you could use to show the profit for any number of t-shirts sold.

p: profit n: number of t-shirts sold

Equation: _____

DESCRIBE THE MEANING OF YOUR EQUATION IN A COMPLETE SENTENCE.