

**Algebra 1**  
**Module 17 Practice Quiz**

Name \_\_\_\_\_

**Show all work in the boxes, and write final answers in the column to the right.**

In 1-2, use the laws of exponents to rewrite the expression as a single power, like  $10^7$ .

1. $(4^2)^4$	2. $(-3)^2 \cdot (-3)^4$	1. _____ 2. _____
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**Simplify each expression completely (convert  $2^4$  to 16):**

3. $4^3 \cdot 4 \cdot 4^5$	4. $(3x^2)^4$	3. _____ 4. _____
5. $4x^2y^3 \cdot 5xy^4$	6. $-(x^7)^2$	5. _____ 6. _____
7. $(-2xy^3)^4$	8. $(3x^3)^2(2x)^3$	7. _____ 8. _____

9. For the expression  $4xy^2z$ , write whether each statement is True or False. If false, rewrite the statement to make it true, in the space below each statement.

\_\_\_\_\_ The expression is a monomial.

\_\_\_\_\_ The expression has a degree of 2.

\_\_\_\_\_ The expression has a coefficient of 4.

Give the degree and leading coefficient of the expression. Name the expression by the number of terms:

10.  $18x - x^2 + 2$

Degree: \_\_\_\_\_

Leading Co: \_\_\_\_\_

Name: \_\_\_\_\_

11.  $-9z - 1$

Degree: \_\_\_\_\_

Leading Co: \_\_\_\_\_

Name: \_\_\_\_\_

Perform the indicated operation and simplify. Circle your final answer:

12.  $4b^5 + 2b^2 - 3b^6 - 7b^5 - b^2 + 3b^5$

13.  $(6x + 4) + (x - 5)$

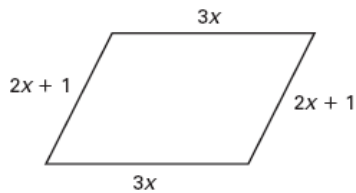
14.  $(3x^2 - 5) - (x^2 + 3x)$

15.  $(4m^2 - 5) + (2 - 3m^2)$

16.  $(-4m^2 + 3m - 1) - (m + 2)$

17.  $(2x)(3x^2) + 7x - (4 - 8x^3 + 5x)$

18. Write a simplified polynomial that represents the perimeter of the given figure:



19. There are two boxes in a storage unit. The volume of the first box is  $4x^3 + 4x^2$  cubic units. The volume of the second box is  $6x^3 - 18x^2$  cubic units. Write a simplified polynomial to show the difference between the two volumes.