

Algebra 1
Module 17 Practice Quiz

Name _____

2:06

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

Simplify each expression completely (convert 2^4 to 16):

<p>1. $(4^2)^4$ $4^8 = 65536$</p>	<p>2. $(-3)^2 \cdot (-3)^4$ $(-3)^6$</p>	<p>1. 4^8</p> <p>2. $(-3)^6$</p>
<p>3. $4^3 \cdot 4^4 \cdot 4^5$ 4^9</p>	<p>4. $(3x^2)^4$ $3^4 x^8$</p>	<p>3. 262144</p> <p>4. $81x^8$</p>
<p>5. $4x^2y^3 \cdot 5xy^4$ $20x^3y^7$</p>	<p>6. $-(x^7)^2$ $-x^{14}$</p>	<p>5. $20x^3y^7$</p> <p>6. $-x^{14}$</p>
<p>7. $(-2xy^3)^4$ $(-2)^4 x^4 y^{12}$</p>	<p>8. $(3x^3)^2 (2x)^3$ $9x^6 \cdot 8x^3$ $72x^9$</p>	<p>7. $16x^4 y^{12}$</p> <p>8. $72x^9$</p>

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.

T The expression is a monomial.

F The expression has a degree of 2.
Degree = $1+2+1=4$

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

Degree: 2

Leading Co: -1

Name: trinomial

11. $-9z - 1$

Degree: 1

Leading Co: -9

Name: binomial

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

12. ~~$4b^6 + 2b^2 - 3b^6 - 7b^5 - b^2 + 3b^6$~~
 $-3b^6 + 1b^2$

13. $(6x + 4) + (x - 5)$
 $7x - 1$

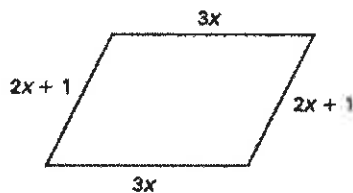
14. $(3x^2 - 5) - (x^2 + 3x)$
 $3x^2 - 5 - x^2 - 3x$
 $2x^2 - 3x - 5$

15. $(4m^2 - 5) + (2 - 3m^2)$
 $1m^2 - 3$

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

17. $(2x)(3x^2) + 7x - (4 - 8x^3 + 5x)$
 ~~$6x^3 + 7x - 4 + 8x^3 - 5x$~~
 $14x^3 + 2x - 4$

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



$P = 6x + 4x + 2$
 $P = 10x + 2$

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 polynomial to show the difference between the two volumes.

$4x^3 + 4x^2 - (6x^3 - 18x^2)$
 $4x^3 + 4x^2 - 6x^3 + 18x^2$
 $-2x^3 + 22x^2$