

Redo Requirement for Chapter 8 and 9

Name: _____

If you are one of the students who must redo the Chapter 8 and 9 Test, you need to do the following problems, showing all work. Show the completed problems to me and check it. Then, I'll write you a Testing Center ticket to try again.

Classify each as monomial, binomial, trinomial, or polynomial.

- | | |
|-----------------------------|-----------|
| 1a. $-361a^4b^5c$ | 1a. _____ |
| 1b. $5r^2 + 11r + 2$ | 1b. _____ |
| 1c. $x^8 - y^8$ | 1c. _____ |
| 1d. $3m^3 - 2m^2 - 12m + 8$ | 1d. _____ |

Determine a) the degree of each term and b) the degree of the polynomial.

- | | |
|--|-----------|
| 2. $10y - 5y^3 + 2y^8 - 12 - y^5 - \frac{1}{4}y^4$ | 2a. _____ |
| | 2b. _____ |
| 3. $4.25c^5d^2 - 10.5cd + 8.75 + 1.2d$ | 3a. _____ |
| | 3b. _____ |

Write these polynomials in descending order.

- | | |
|--|----------|
| 4. $2a + a^{10} - 14a^2 + 5a^5 - 11a^3 - 3a^9$ | 4. _____ |
| 5. $15 - 2x + x^2$ | 5. _____ |
| 6. $-14 + 5y^3 + y^6$ | 6. _____ |

Write these polynomials in ascending order.

- | | |
|---|----------|
| 7. $\frac{1}{3}n^5 - \frac{1}{4}n^4 + \frac{1}{12}n^2 - n^3 + \frac{1}{9}n^8$ | 7. _____ |
| 8. $c^3 - 4c^2 + 12 - 8c$ | 8. _____ |

Evaluate the following polynomials at the given values.

- | | |
|--|-----------|
| 9. $m^5 - 2mn + 4n^2$ for $m = 1$ and $n = -3$. | 9. _____ |
| 10. $e + \frac{1}{2}ef^2 - \frac{1}{4}f$ for $e = -2$ and $f = -4$. | 10. _____ |
| 11. $x^5 - 2xy - 3x^2y^3 + 5y$ for $x = 0$ and $y = -1$. | 11. _____ |

**For #'s 12-26, assume all variables represent nonzero numbers.
Simplify and write with positive exponents.**

12a. $(5a + 2)^4(5a + 2)^8$

12a. _____

12b. $(y - 11)(y - 11)^4$

12b. _____

13a. $5c^{-2}d^{-5}e^0$

13a. _____

13b. $8a^0b^0c^{-2}$

13b. _____

14a. $(-10x^3y^{-5}z^2)^3$

14a. _____

14b. $(-6a^{-2}b^{-3}c)^2$

14b. _____

15a. $\left(\frac{5x}{(2y)^3}\right)^{-2}$

15a. _____

15b. $\left(\frac{(3a)^3}{10c}\right)^{-2}$

15b. _____

16a. Add: $(7y^5 + 3y^3 - 6y^4 - 1)$ and $(6y^4 + 5 + 6y^2 - 4y^3)$

16a. _____

16b. Find the sum of $(2n^2 - 4n^4 + n^3)$ and $(4 - 3n^3 + n^4 - n^2)$

16b. _____

17a. Subtract: $(6x^5 - 3x^4 + 1 + x) - (3x^4 + 8x^5 - 1)$

17a. _____

17b. Subtract: $(14m^2 - 5)$ from $(12m^2 + 3)$

17b. _____

Multiply. Express your results with positive exponents.

18a. $(2m^3n^4t^6)(-3mnt^2)$

18a. _____

18b. $(-1.2x^3y)(6x^9y^8)$

18b. _____

19a. $4n(n^6 - 7n^5 + 12n^4 - 3n^3)$

19a. _____

19b. $15a^4(2a^3 - 3a^2 + a - 4)$

19b. _____

20a. $(13x - 12)(13x + 12)$

20a. _____

20b. $(4y + 7)(4y - 7)$

20b. _____

21a. $(6x - 5)(2x + 1)$

21a. _____

21b. $(2c + 3)(3c - 4)$

21b. _____

22a. $(8z - 9)^2$

22a. _____

22b. $(x - 5)^2$

22b. _____

23a. $(x-4)(x^2+4x+16)$

23a. _____

23b. $(p+q)(p^2-pq+q^2)$

23b. _____

Divide. Express your results with positive exponents.

24a. $\frac{-14a^{14}b^{-5}}{-18a^{-2}b^{-10}}$

24a. _____

24b. $\frac{34r^{14}t^{-3}}{-8r^8t^5}$

24b. _____

25a. $\frac{(x^5y^{-2})^3}{(x^4yz^2)^4}$

25a. _____

25b. $\frac{m^{12}np^7}{(m^4n^2p)^3}$

25b. _____

26a. $\frac{15y^5-6y^4+18y^3}{3y^2}$

26a. _____

26b. $\frac{30x^8y^5-15x^6y^2+40x^4y}{5x^4y^2}$

26b. _____

27a. Roger's Relics has a production process with a setup cost of \$500.00. It cost \$15.00 to produce each relic.

- (a) Write the cost function.
- (b) If each relic sells for \$40, write the revenue function.
- (c) Write the profit function and simplify.

27b. Bart's Bears manufactures stuff bears with a production cost of \$3,000 and a cost of \$15 per bear. Each bear sells for \$35.

- (a) Write the cost function.
- (b) Write the revenue function.
- (c) Write the profit function and simplify.

28a. The length of a rectangle is 3 inches more than the width.

- (a) Write expressions for the length and the width.
- (b) Write an expression for the area of a rectangle.
- (c) Find the area given the width is 6 inches.

28b. Andre plans to enlarge the deck on his home. The current deck is three times as long as it is wide. Andre plans to double the width and add 9 feet to the length.

- (a) Write a polynomial for the current area of the deck.
- (b) Write a polynomial for the area of the planned enlarged deck.
- (c) What is the difference of the planned area and the current area.