

Unit 5: Polynomials Practice Test

Math 9 Principles

Name: _____

Block: _____

Please initial this box to indicate you carefully read over your test and checked your work for simple mistakes.

	What I can do in this unit	Level
5-1	I can identify, add, and subtract like terms.	
5-2	I can identify, add, and subtract monomials, binomials, trinomials, and quadrinomials and determine their degree.	
5-3	I can simplify products and quotients of monomials and use the Distributive Property when multiplying a monomial and a polynomial.	
5-4	I can use the Distributive Property to evaluate the product of two binomials (FOIL) or a binomial and a trinomial.	
5-5	I can write and simplify the quotient of a polynomial and a monomial as separate terms.	
5-6	I can factor polynomials using the Greatest Common Factor (GCF) method.	
5-7	I can factor polynomials with a leading coefficient of one using the Product Sum technique and trinomials with a leading coefficient that is other than one using a combination of GCF and Product Sum technique.	
5-8	I can evaluate surface areas of composite shapes.	

Code	Value	Description
N	Not Yet Meeting Expectations	I just don't get it.
MM	Minimally Meeting Expectations	Barely got it, I need some prompting to help solve the question.
M	Meeting Expectations	Got it, I understand the concept without help or prompting.
E	Exceeding Expectations	Wow, nailed it! I can use this concept to solve problems I may have not seen in practice. I also get little details that may not be directly related to this target correct.

5-1 I can identify, add, and subtract like terms.

Simplify each expression:

1) $18c - -12c$	2) $15x^2 - 8x + 3x^2$
3) $15 - 6x$	4) $5x - 4y + y - 5x$
5) $2x + (-3x) + 2 - x - -5x - 1$	6) $(5 - r) + (12r - -8)$
7) $(-5y + 2x - 5) + (2x - 1)$	8) $(2z - 3y) + (z - y)$

5-2 I can identify, add, and subtract monomials, binomials, trinomials, and quadrinomials and determine their degree.

Simplify each expression:

9) $(5x - 12) - (2x + 2)$	10) $(4a - 5b) - (3b - a)$
11) $(5x^3 - 3x) - (-x^3 + x^2)$	12) $(-5x^2y + x^2 - y) - (5x^2y + 2x^2)$
13) $(3x^2 - 5x + 7) - (-5x^2 - x - 6)$	14) $-x - (5 - x) + 17 - (-x)$
15) $(-y^2 + y) - (-2y^3 + y^2)$	16) $(2x^2 - 8) + (-x - 10) - (-x^2) - (4x^2 - 5x)$
17) How many terms does the expression $19x^4 - 5x^3 - 15x^2 + 6x - 7$ have?	
18) Give the degree of the polynomial $5a^6b - 20a^2b^3 + 12a$.	
19) Give the degree of the constant 15.	

5-3 I can simplify products and quotients of monomials and use the Distributive Property when multiplying a monomial and a polynomial.

Simplify each expression:

20) $(5a)(-6a)$	21) $(-5x^2)(-8x^3)$
22) $(-5a^2b^4)(8ab^3)$	23) $(4xy^5)(-7xy)$
24) $(-a^2)^4(-3a^2)$	25) $\frac{5x^5}{15x^3}$
26) $\frac{56a^5}{7a}$	27) $-3(2x - 1)$
28) $5b(-3b^2 + 2b - 8)$	29) $(x^2)(6x^2 - 15x + 3)$

5-4 I can use the Distributive Property to evaluate the product of two binomials (FOIL) or a binomial and a trinomial.

Simplify each expression:

30) $(x + 6)(x + 2)$	31) $(a - 3)(a + 9)$
32) $(x - 8)(x - 1)$	33) $(x - 3)(x - 15)$
34) $(x + 4)(x - 5)$	35) $(2x - 5)^2$
36) $(x + 2)(x^2 - 5x - 1)$	37) $(x - 2)^3$

5-5 I can write and simplify the quotient of a polynomial and a monomial as separate terms.

Divide. Write as separate quotients first, then reduce:

38) $\frac{15a-10}{5}$	39) $\frac{27y-9}{9}$
40) $\frac{6k^2+15k}{3}$	41) $\frac{(-16c+24d+72)}{4}$
42) $\frac{-24x^3+20x^2-4x}{-4}$	43) $\frac{12a^2-9a^6}{-3a^2}$
44) $\frac{a^2b-4ab^2-ab^3}{ab}$	45) $\frac{16x^2y+24x^2y^2}{4y}$

5-6 I can factor polynomials using the Greatest Common Factor (GCF) method.

46) $24x^3 - 12x^2$	47) $-16x^4 + 40x^3$
48) $6x^2 - 36x$	49) $81x^3 + 18x^2 - 27x$
50) $15x^2y^2 - 25x^2y$	51) $a^3 - 15a^2 + 3a$
52) $15x^3y^2 - 12x^2y^3 + 3x^2y^2$	53) $16a^4b^2 - 4a^2b^2 - 8a^2b$

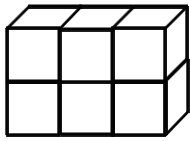
5-7 I can factor factorials with a leading coefficient of one using the Product Sum technique and trinomials with a leading coefficient that is other than one using a combination of GCF and Product Sum technique.

54) $x^2 + 5x + 6$	55) $x^2 - 6x - 16$
56) $x^2 - 11x + 18$	57) $x^2 - 3x - 10$
58) $2x^2 - 8x - 10$	59) $3x^2 + 15x + 18$
60) $x^3 - 3x^2 + 2x$	61) $-x^2 + 5x + 36$

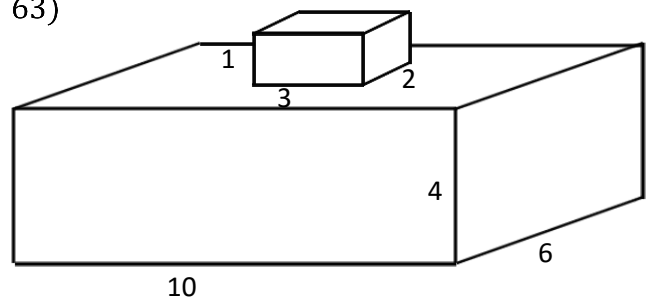
5-8 I can evaluate surface areas of composite shapes.

Find the surface area of each shape.

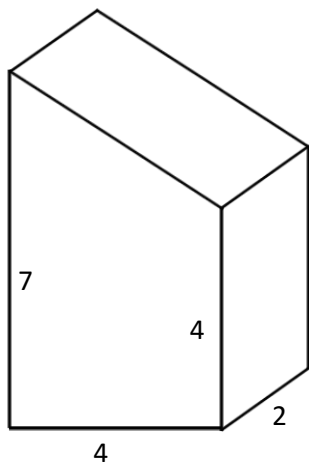
62)



63)



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