

Foundations of Math 1 Unit 5 Study Guide

Teacher: _____

Student Name: _____

ANSWER KEY

DIRECTIONS: Do all work on separate scratch paper. Your work must be neat, well-organized, complete, and lead to the answer you give, circle your answers. Copy your answers to the appropriate place provide on this test.

J. 1: Multiplying Polynomials

- $4x(x^2 - 3x + 5)$
- $-2x^3(6x^6 + 7x^4 + x^2)$
- $4x(5x^3 + 2x^2 - 5x) - 2x^2(7x^2 - x + 8)$
- $5x^2(2x^2 + 4xy - x) - 6x(3x^2 - 5x - 2x^2y)$

OBJ. 2: Multiplying Polynomials

- $(3x - 2)(x + 4)$
- $(4x + 3y)(2x - y)$
- $(x - 3)^2$
- $(2x - 1)(3x^2 + 4x - 1)$

Obj. 3: Application

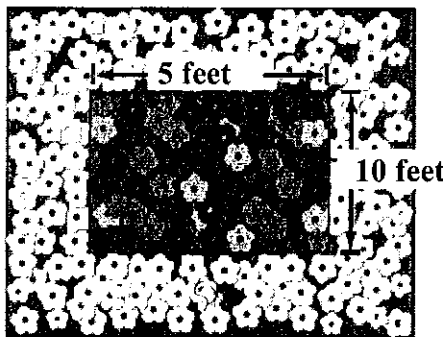
9. The area of a triangle can be found using the formula $A = \frac{1}{2}bh$. If the height of the triangle is x and the base is $2x + 4$. Find the simplified expression for the area of the triangle.

10. Find the simplified expression for the volume of the cube at the right.



$2x-1$ $4x^2-4x+1$

11. The Lush Landscaping Company is involved in a project for the city. They will be enlarging the garden in front of City Hall. The current dimensions of the garden are 5 feet long by 10 feet wide. The company plans to make the garden area larger by planting a border of flowers all the way around the existing garden. The border will have the same width around the entire garden. Let x represent the width of the border. Write a polynomial expression that represents the area of the rder.



12. There are three consecutive odd integers. The product of the larger two integers is equivalent to the sum of the first integer squared and 98. What are the integers?

Objective	Score
1	A B NY
2	A B NY
3	A B NY
4	A B NY
5	A B NY

ANSWERS:

1.	$4x^3 - 12x^2 + 20x$		
2.	$-12x^9 - 14x^7 - 2x^5$		
3.	$6x^4 + 10x^3 - 36x^2$		
4.	$10x^4 + 32x^3y - 23x^3 + 30x^2$		
4/4 = 100	3/4 = 80	0-2 = NY	
5.	$3x^2 + 10x - 8$		
6.	$8x^2 + 2xy - 3y^2$		
7.	$x^2 - 6x + 9$		
8.	$6x^3 + 5x^2 - 6x + 1$		
4/4 = 100	3/4 = 80	0-2 = NY	
9.	$x^2 + 2x$		
10.	$8x^3 - 12x^2 + 6x - 1$		
11.	$4x^2 + 30x$		
12.	15, 17, 19		
4/4 = 100	3/4 = 80	0-2 = NY	
13.	$y = \frac{4}{3}x - 5$		
14.	$0 < c < 50$ $-8.75 < P(c) < 28.75$		
15.	$\frac{y^4}{2x^{10}}$		
16.	$x = \frac{3y}{(z_1 + z_2)}$		
4/4 = 100	3/4 = 80	0-2 = NY	
17.	$40x - 16$		
18.	$2x^2 + 5x + 5$		
19.	$24x^4 - 18x^3 - 42x^2$		
20.	-40		
4/4 = 100	3/4 = 80	0-2 = NY	