Geometry Answer Key to Summer Packet

I. Polynomials

1. \(-8n^5 + 12n^3 - 8n^2\)
2. \(8w^2 - 2w - 21\)
3. \(16t^2 - 40t + 25\)

II. Factoring “Try Now”

I. \((w+14)(w+1)\)
2. \(7ab(3b+5)\)
3. \(6(x+y)(x-y)\)
4. \((3z+11)(3z-11)\)
5. \((x+y)(x+2)\)
6. \((8t-1)^2\)
7. \((2y+5)(4y+3)\)
8. \(2k(k-9)^2\)
9. \((2x+1)(2x-1)(2x+5)\)

III. Linear Equations “Try Now”

1. \(X = -1\)
2. \(X = -4\)
3. \(X = 6\)
4. \(X = -8\)
5. \( X = 288 \)
6. \( X = 7/23 \)
7. \( X = 13/7 \)
8. \( X = 3/7 \)
9. \( X = 4/3, -11/2 \)
10. \( G = 2, 5 \)
11. \( y = 0, \pm 7 \)

IV. Literal Equations “Try Now”

1. \( b = \frac{2A}{h} \)
2. \( b_2 = 19 \)

V. Real Numbers

Answers to: Simplify the following radicals.

\( a) \ \sqrt[3]{90} = 3\sqrt[3]{10} \)
\( b) \ -40\sqrt{3} \)
\( c) \ \sqrt[3]{\frac{18}{49}} = \frac{3}{7}\sqrt{2} \)
\( d) \ \sqrt{\frac{1}{3}} = \frac{1}{3}\sqrt{3} \)
\( e) \ \frac{\sqrt{26}}{\sqrt{50}} = \frac{\sqrt{26}}{\sqrt{50}} = \sqrt[2]{\frac{13}{25}} = \frac{1}{5}\sqrt{13} \)
\( f) \ 2\sqrt{54} + 4\sqrt{27} + 5\sqrt{48} = 2\cdot3\sqrt{6} + 4\cdot3\sqrt{3} + 5\cdot4\sqrt{3} = 6\sqrt{6} + 32\sqrt{3} \)

Answers to Simplify the following using order of operations.

1. 3
2. 3
3. 8
4. 7
5. 4
6. 60
7. 31

Answers to “Try Now”
Answers to “Determine the slope of the following”

1. \( m = \frac{1}{4} \)
2. \( m = -\frac{4}{3} \)
3. \( m = -\frac{21}{11} \)
4. The slope is undefined!
5. \( m = -\frac{1}{4} \)
6. \( m = -\frac{1}{2} \)
7. \( m = 3 \)

Answers to Writing Equations of Lines

1. \( y = -\frac{5}{4}x - 4 \)
2. \( y = 5x + 8 \)
3. \( x = -7 \)
4. \( y = \frac{3}{2}x - 4 \)
5. \( y = -\frac{1}{3}x + 7 \)
6. \( y = x - 7 \)

VI. Answer to Systems of Equations.
1. \((2, -2)\)
2. Solution is all real numbers
3. \((1, 2)\)
4. No Solution!