Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_

**Unit 1 Test Review**

1. Classify each polynomial according to degree and number of terms.

|  |  |  |
| --- | --- | --- |
| 7p4 | 4x3y2+6x2y-2xy | -5xy2-2x5y |

2.Write each polynomial in standard form and then name it based on the degree and the number of terms.

|  |  |  |
| --- | --- | --- |
| -9x+6x2 | 3y-4-y3 | 7-11v |

3. Add/subtract the polynomials, and then classify the answer according to degree and number of terms.

|  |  |
| --- | --- |
| (4x2+6x+7)+(2x2-9x+1) | (2x3+5x-3x)-(x3-8x2+11) |
| (12m2+4)+(8m2+5) | (8d4-9d)-(2d4+d)+(7d+6) |

4. Simplify each product. Use the distributive property.

|  |  |
| --- | --- |
| -4y2(5y4-3y2+2) | 2x2y(5x2y2+6x3y-2x+y) |

5. Multiply each of the following. Simplify completely, and write each answer in standard form.

|  |  |
| --- | --- |
| (3x-5)(2x+7) | (5m+2)(8m-1) |
| Find the area. 2x+53x+1 | 2x-22x+5 |
| (2x-3)(4x2+x-6) | (6x-8)(2x2+3x+7) |
| (x+3)2 | (r-12)2 |
| (x+9)(x-9) | (3x+7)(3x-7) |

6. Identify the number set(s) to which each number belongs.

|  |  |
| --- | --- |
| $$\sqrt{72}$$ |  |
| $$\frac{25}{4}$$ |  |
| $$-\frac{25}{5}$$ |  |
| $$\frac{5}{25}$$ |  |
| $$\frac{34}{2}$$ |  |
| -6 |  |
| 0 |  |

7. Simplify each of the following completely.

|  |  |  |
| --- | --- | --- |
| $$\sqrt{2400}$$ | $$4\sqrt{76}$$ | $$3\sqrt{270}$$ |
| $$4\sqrt{18}-\sqrt{48}+5\sqrt{8}$$ | $$3\sqrt{700}+4\sqrt{63}$$ | $$\sqrt{\frac{54}{36}}$$ |
| $$-4\sqrt{6}\left(2\sqrt{3}-5\sqrt{10}\right)$$ | $$\sqrt{\frac{98x^{2}}{27x^{2}}}$$ | $$\frac{-3}{2\sqrt{3}-\sqrt{7}}$$ |

8. Use dimensional analysis to solve each problem below. Show the steps.

|  |
| --- |
| One milliliter of food coloring makes enough blue frosting for 10 cupcakes. If you had 2 cups of food coloring, how many blue cupcakes could you frost? |
| Your car is leaking oil from it’s engine at 2 fluid ounces every 6 hours. How many quarts of oil will it leak in one week? If a month is 4 weeks long and your car can hold 8 quarts of oil at one time, will you have to add more oil at the end of the month? Why or why not?  |
| A dripping shower leaks 1 fluid ounce of water every 20 minutes. How many gallons will it leak in 1 week? |
| Marching bands march 8 steps each 5 yards and they march 50 steps per minute. If the band marches continuously, how long will it take to march 1 mile? |