|  |  |  |
| --- | --- | --- |
| Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Factoring out GCF from Polynomials | | |
| **1. What is the greatest common factor of:**  12 and 18 | **2. What is the greatest common factor of:**  27 and 63x | **3. What is the greatest common factor of:**  16x2 and 24x |
| **4. What is the greatest common factor of:**  10 and 35 and 15 | **5. What is the greatest common factor of:**  8x2 and 30x3 and 16x | **6. What is the greatest common factor of:**  x6 and 2x5 and 5x2 |
| **Factor the greatest common factor out of each expression.**  **If there is no common factor, write prime.** | | |
| **7.** **Factor the polynomial:**  45x2 – 25 | **8.** **Factor the polynomial:**  6x + 3 | **9.** **Factor the polynomial:**  24x2 – 8x |
| **10.** **Factor the polynomial:**  -2x2 + 8x | **11.** **Factor the polynomial:**  -4x + 10 | **12.** **Factor the polynomial:**  1 + 2x2 |
| **13.** **Factor the polynomial:**  12x2 – 9x + 15 | **14.** **Factor the polynomial:**  -3x3 – 12x2 + 15x | **15.** **Factor the polynomial:**  9x2 – 4x + 12 |
| **16.** **Factor the polynomial:**  2x4 – 3x2 + 5x | **17.** **Factor the polynomial:**  17x2 + 34x + 51 | **18.** **Factor the polynomial:**  -20x6 – 40x4 + 20x2 |
| **19.** **Factor the polynomial:**  8x3y2 + 4x2 | **20.** **Factor the polynomial:**  -10xy4 – 15x2y2 | **21.** **Factor the polynomial:**  4x2y3 + 4x2y2 – 8x3y4 + 16x3y2 |