

Write in Standard form; identify the leading coefficient, degree, number of terms, and name.

1.  $-x^4 + 8x^3 + 1 + 2x$

SF: \_\_\_\_\_

LC: \_\_\_\_\_

Degree: \_\_\_\_\_

# of Terms: \_\_\_\_\_

Name: \_\_\_\_\_

2.  $-3x + 7x^3 - 1$

SF: \_\_\_\_\_

LC: \_\_\_\_\_

Degree: \_\_\_\_\_

# of Terms: \_\_\_\_\_

Name: \_\_\_\_\_

3.  $1 - x$

SF: \_\_\_\_\_

LC: \_\_\_\_\_

Degree: \_\_\_\_\_

# of Terms: \_\_\_\_\_

Name: \_\_\_\_\_

4.  $8x + 2x^5 - 5x^3$

SF: \_\_\_\_\_

LC: \_\_\_\_\_

Degree: \_\_\_\_\_

# of Terms: \_\_\_\_\_

Name: \_\_\_\_\_

Add, subtract, or multiply. Write the solution in standard form.

5.  $(6x - 7x^2) + (4x^2 + 6)$

6.  $(8 - 5x^2) - (7x^2 + 5)$

7.  $(2x^2 + 5x) + (7 + 5x^2 - x)$

8.  $(5x^2 - 8) - (3x + 4 - 5x^2)$

9.  $(6x - 4x^4 + 5x^3) + (x^3 - 6x^4 + 7x)$

10.  $(6x^4 - x^3 + 5) - (2x^4 + 3x^3 - 1)$

11.  $(5x + 3)(8x + 7)$

12.  $(3x + 1)^3$

13.  $(3x + 5)(7x - 4)$

14.  $(4x + 5)(4x + 6)$

15.  $(x - 2)^4$

16.  $(4x + 2)(4x + 5)$

17.  $(5x + 4)(4x^2 + 2x - 4)$

18.  $(5x - 6)(5x^2 + 4x - 2)$

19.  $(3x + 4)(5x^2 - 6x - 6)$

20.  $(8x + 2)(3x^2 + 4x - 5)$

21.  $(8x^2 + x - 4)(6x^2 - 6x - 4)$

22.  $(6x^2 + 6x + 2)(3x^2 + 5x + 7)$

23.  $(4x^2 - 7x - 7)(3x^2 + x + 4)$

24.  $(8x^2 + 3x + 1)(3x^2 - 7x + 6)$

CP Algebra 2  
GCF and Difference of Squares Homework

Name \_\_\_\_\_

Factor the greatest common factor out of each polynomial. If the GCF is 1, write PRIME.

1.  $18x^2 - 50y^2$

2.  $100z^9 + 50z^6 - 75z^5$

3.  $36rs^2 - 108r^2s^3$

4.  $36k - 30$

5.  $a^7b - a^{10}$

6.  $2c^5d^4 - 3c^4 + 4c^3$

7.  $3g^8 + 3g^7$

8.  $18x^5 - 48x^4 + 56x^3 - 86x$

9.  $23y^{10} - 46y^7 + 68y^2 + 10y$

Factor the difference of squares.

10.  $64z^2 - 36$

11.  $49d^2 - 25$

12.  $4r^2 - 121$

13.  $9s^2 - 144$

14.  $c^2 - 625$

15.  $x^2 - 36$

16.  $25p^2 - 144$

17.  $4b^2 - 100$

18.  $36m^2 - 81$

19.  $-2x^2 + 32$

20.  $-4r^2 + 100s^2$