

SHOW ALL WORK ON ANOTHER SHEET OF PAPER

### POLYNOMIAL OPERATIONS PRACTICE

means standard form

Add the following polynomials (Write answers in descending order):

- $(7j^3 - 2) + (5j^3 - j - 3)$
- $(8a^5 - 4) + (3a^5 + a - 2)$
- $(6m^5 + 1) + (2m^5 + 9m - 1)$
- $(3m^5 + 1) + (9m^5 + 3m - 2)$
- $(-5x^2 - x + 4) + (-3x^2 - 5x + 2)$
- $(-4x + 4x^3 + 7) + (3x^3 - 9 - 3x)$
- $(3x^2 - 2x + 1) + (-x^2 + 3x + 1)$

means standard form

Subtract the following polynomials (Write answers in descending order):

- $(-x^2 + x - 4) - (3x^2 - 8x - 2)$
- $(8x^2 - 3x) - (5x - 5 - 8x^2)$
- $(-x^2 - 5x - 3) - (-7x^2 - 8x - 8)$
- $(-2x^3 + x) - (7x - 3 - 7x^3)$
- $(3x^3 + 3x^2 + 9) - (5x^3 - 7x^2 + 6x - 9)$
- $(5x^3 + 5x^2 + 5) - (6x^3 - 6x^2 + 8x - 5)$
- $(5x^3 + 3x^2 + 5) - (7x^3 - 9x^2 + 8x - 5)$

Multiply the following polynomials:

- |                                  |                               |
|----------------------------------|-------------------------------|
| 15. $(8x^3y^2)(-3x^2y^3)$        | 25. $(4x - 3)(3x - 5)$        |
| 16. $(-9x^3y)(-8x^2y^3)$         | 26. $(x - 8)(x - 7)$          |
| 17. $j^2(k^5j^3)$                | 27. $(6a + 1)(5a + 2)$        |
| 18. $a^4(b^4a^6)$                | 28. $(5x + 4y)(2x + 5y)$      |
| 19. $2x^3(9x^2 + 5y)$            | 29. $(2x + y)(4x - 9y)$       |
| 20. $5x^3(2x + 4y)$              | 30. $(6r - 5)(6r + 1)$        |
| 21. $5m^2(3m^3 + 5m^2 - 4m + 6)$ | 31. $(6c + 7)(6c - 7)$        |
| 22. $-4x^2y(x^2 + 7xy - 6y^3)$   | 32. $(3x + 5y)^2$             |
| 23. $(x + 6)(x + 2)$             | 33. $(x - 2)(x^2 - x + 3)$    |
| 24. $(x - 6)(x + 9)$             | 34. $(2x - 5)(5x^2 + 4x + 7)$ |

Divide the following polynomials: [Remember to put them in standard form.]

- |  |   |
|--|---|
| 35. $\frac{9x-6}{3}$                     | 45. $\frac{f^3+64}{f+4}$                    |
| 36. $\frac{4x-7}{2}$                     | 46. $\frac{4p-2+3p^2}{p-1}$                 |
| 37. $\frac{x^2-3x+5}{x}$                 | 47. $\frac{3m-4+2m^2}{m+5}$                 |
| 38. $\frac{5x^2-25x+2}{-5x}$             | 48. $\frac{j^3-64}{j-4}$                    |
| 39. $\frac{4x^{10}-5x^9-20x^4}{4x^2}$    | 49. $\frac{-5p+4p^2+4}{p-2}$                |
| 40. $(-x^6 + x^5 + 7x^2 - 9) \div x^4$   | 50. $(4p + 3p^2 - 1) \div (p + 4)$          |
| 41. $(x^2 + 2x + 6) \div x$              | 51. $(20x^2 - 13x + 2) \div (5x - 2)$       |
| 42. $(3x^2 - 15x + 5) \div (-3x)$        | 52. $(12x^2 - 6x^3 - 3 - 9x) \div (3x - 3)$ |
| 43. $(2x^{11} - 5x^7 - 10x^6) \div 2x^3$ | 53. $(8x^2 - 2x - 3) \div (2x + 1)$         |
| 44. $(-2x^6 + 5x^5 + 9x^2 + 2) \div x^4$ | 54. $(-3x^2 + 6x^3 - 4 - x) \div (2x + 1)$  |

EVEN'S FOR A JOB ON 4X HW. DO ODDS FOR 150 POINTS.