

NAME _____

DATE _____

ADD & SUBTRACT POLYNOMIALS: Worksheet 2

Coefficients:

- 1) Name the coefficient of the 2nd term. $-9w^2 - w + 2$
- 2) Name the coefficient of the 1st term. $2y^3 - 3y^2 + 5y - 1$
- 3) Name the coefficient of the 3rd term. $-2w^3 + 3w^2 - 5w + 8$

Are the following like terms (yes or no)?

- | | | |
|------------------|-----------------------|--------------------|
| 4) $9ab$ $9a^2b$ | 5) $5x^5$ $2x^5$ | 6) $8ab$ $-ab$ |
| 7) 6 -6 | 8) w^8y^2 $3y^2w^8$ | 9) $3t^5y$ $5t^3y$ |

Simplify by combining like terms.

- | | | |
|------------------|-----------------------------|---------------------------------|
| 10) $3x + 9 - x$ | 11) $4y^2 - 8y - 5y^2 + 3y$ | 12) $-2w^2 - 3w + 4 - 3w^2 + 6$ |
|------------------|-----------------------------|---------------------------------|

Add the following polynomials.

- | | | |
|-------------------------------------|--|--|
| 13) $(8z - 2) + (3z + 5)$ | 14) $(9t^2 + t) + (t^2 - 4t)$ | 15) $(-5x^2 - 3x) + (2x^2 - 2x - 2)$ |
| 16) $(2y^2 - 8y - 1) + (-y^2 - 2y)$ | 17) $(4x^2 - x + 7) + (3x^2 - 4x - 2)$ | 18) $(5r^2 + 8r + 1) + (r^2 - 3r - 4)$ |

Subtract the following polynomials.

- | | | |
|-------------------------------------|---|--|
| 19) $(2x - 7) - (9x - 2)$ | 20) $(2z^2 + 3) - (z^2 + 5)$ | 21) $(4y - 3) - (-6y^2 - 2y - 1)$ |
| 22) $(3h^2 + 2h - 4) - (-3h^2 - 4)$ | 23) $(-2x^2 + 4x + 5) - (x^2 - 3x + 4)$ | 24) $(7q^2 + q - 8) - (-3q^2 - q - 5)$ |

KEY

ADD & SUBTRACT POLYNOMIALS: Worksheet 2

Coefficients:

- 1) Name the coefficient of the 2nd term. $-9w^2 - w + 2$
-1
- 2) Name the coefficient of the 1st term. $2y^3 - 3y^2 + 5y - 1$
2
- 3) Name the coefficient of the 3rd term. $-2w^3 + 3w^2 - 5w + 8$
-5

Are the following like terms (yes or no)?

- | | | |
|----------------------------|----------------------------------|------------------------------|
| 4) $9ab$ $9a^2b$ <i>no</i> | 5) $5x^5$ $2x^5$ <i>yes</i> | 6) $8ab$ $-ab$ <i>yes</i> |
| 7) 6 -6 <i>yes</i> | 8) w^8y^2 $3y^2w^8$ <i>yes</i> | 9) $3t^5y$ $5t^3y$ <i>no</i> |

Simplify by combining like terms.

- | | | |
|------------------------------|---|--|
| 10) $3x + 9 - x$
$2x + 9$ | 11) $4y^2 - 8y - 5y^2 + 3y$
$-y^2 + -5y$ | 12) $-2w^2 - 3w + 4 - 3w^2 + 6$
$-5w^2 - 3w + 10$ |
|------------------------------|---|--|

Add the following polynomials.

- | | | |
|--|---|---|
| 13) $(8z - 2) + (3z + 5)$
$11z + 3$ | 14) $(9t^2 + t) + (t^2 - 4t)$
$10t^2 - 3t$ | 15) $(-5x^2 - 3x) + (2x^2 - 2x - 2)$
$-3x^2 - 5x - 2$ |
| 16) $(2y^2 - 8y - 1) + (-y^2 - 2y)$
$y^2 - 10y - 1$ | 17) $(4x^2 - x + 7) + (3x^2 - 4x - 2)$
$7x^2 - 5x + 5$ | 18) $(5r^2 + 8r + 1) + (r^2 - 3r - 4)$
$6r^2 + 5r - 3$ |

Subtract the following polynomials.

- | | | |
|--|---|--|
| 19) $(2x - 7) - (9x - 2)$
$-7x - 5$ | 20) $(2z^2 + 3) - (z^2 + 5)$
$z^2 - 2$ | 21) $(4y - 3) - (-6y^2 - 2y - 1)$
$6y^2 + 6y - 2$ |
| 22) $(3h^2 + 2h - 4) - (-3h^2 - 4)$
$6h^2 + 2h$ | 23) $(-2x^2 + 4x + 5) - (x^2 - 3x + 4)$
$-3x^2 + 7x + 1$ | 24) $(7q^2 + q - 8) - (-3q^2 - q - 5)$
$10q^2 + 2q - 3$ |