

Do Now: Add the following polynomials

① $20b^3 + 15b$ and $-4b^2 - 5b + 14$

② $(5y^2 + 4y - 6) + (2y^2 - 5y + 8)$

$(4k^2 + 2k + 7) - (5k^2 - 6k + 3)$ Subtracting Polynomials

$(4k^2 + 2k + 7) + (-5k^2 + 6k - 3)$ - Very similar to adding
Still ^{combine} like variables

$$-k^2 + 8k + 4$$

- Still ^{combine} like exponents and like variables

- Still combine constants with constants

* Distribute the negative (subtraction) to each term after it.

{ change the signs }

Steps to Subtracting

- ① Distribute the negative to every term after it
- ② Change the subtraction sign to adding.
- ③ Add and combine like terms

$$(-z^2 - 5z - 8) - (3z^2 - 5z + 5)$$

$$(-z^2 - 5z - 8) + (-3z^2 + 5z - 5)$$

$$-4z^2 - 13 \quad \text{or} \quad -4z^2 + 0 - 13$$

$$\textcircled{2} \quad 7y^2 - y + 2$$

$$\textcircled{4} \quad 5p^2 - 3p + 6$$

$$\textcircled{6} \quad 4t^2 + 3t - 5$$

$$\textcircled{8} \quad s^3 + s^2 + 2$$

$$\textcircled{10} \quad 7m^2 - 3m + 2$$

$$\textcircled{12} \quad T^2 + 2T + 4$$

$$\textcircled{14} \quad 13s^3 + 10s^2 + 3s$$

$$\textcircled{1} 3y^2 + 3y + 6$$

$$\textcircled{3} 5x^3 + x^2 + 3x + 1$$

$$\textcircled{5} w^2 + w$$

$$\textcircled{7} t^4 + 2t^3 + 5t + 4$$

$$\textcircled{9} 4v^3 - v^2 + v - 4$$

$$\textcircled{11} 3x^2 + 2$$

$$\textcircled{13} 3p^4 - 3p^2 - p + 7$$

