

Homework Review:

Sect 7.4 # 20 – 39, 41 – 46

20) No

30) 5

39) $-b^6 - 9b^2 + 10b; -1$

21) Yes

31) 7

41) quadratic trinomial

22) Yes

32) $5x^2 + 3x - 2; 5$

42) cubic monomial

23) No

33) $7y^3 + 8y; 7$

43) quartic binomial

24) Yes

34) $-5c^2 - 3c + 4; -5$

44) cubic binomial

25) Yes

35) $-4d^4 - d^2 + 1; -4$

45) quintic polynomial

26) 4

36) $t^5 + 2t^2 + 11t - 3; 1$

46) cubic trinomial

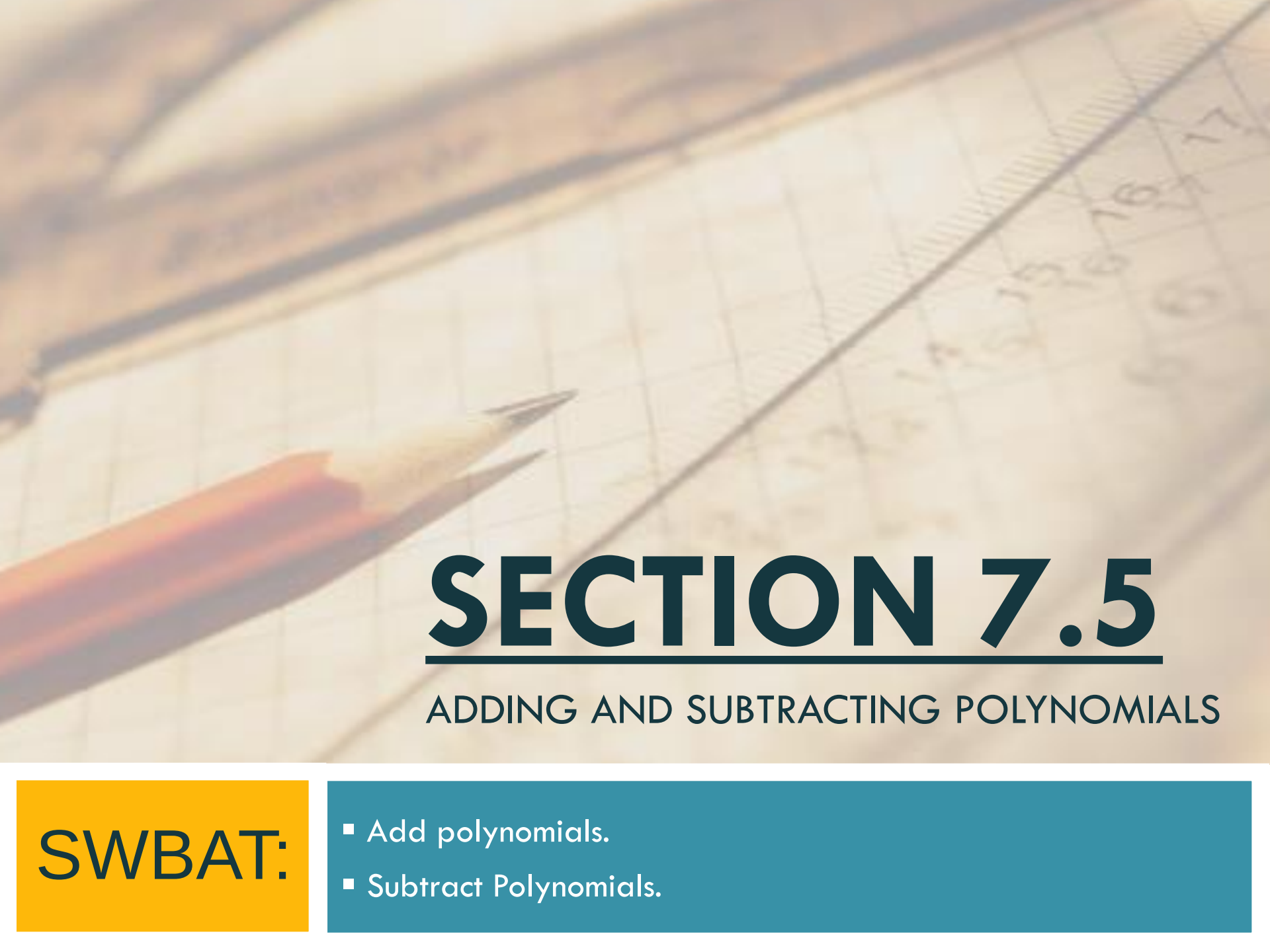
27) 1

37) $-r^3 + r + 2; -1$

28) 0

38) $-3x^4 + \frac{1}{2}x + 7; -3$

29) 3



SECTION 7.5

ADDING AND SUBTRACTING POLYNOMIALS

SWBAT:

- Add polynomials.
- Subtract Polynomials.

Ex. I Adding Polynomials

****You Must Turn ALL Subtraction Into Addition of a Negative!!!**

Note to self: Line up like terms vertically.

Then add coefficients down.

Note:

$$(2x^2 + x - 5) + (x + x^2 + 6)$$

$$\begin{array}{r} 2x^2 + 1x - 5 \\ + 1x^2 + 1x + 6 \\ \hline 3x^2 + 2x + 1 \end{array}$$

$$X + X = 2X$$

$$X \cdot X = X^2$$

Ex. 2 Adding Polynomials

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

$$5x^3 + 2x^2 - 1x + 7$$

$$0x^3 + 3x^2 - 4x + 7$$

$$+ -1x^3 + 4x^2 + 0x - 8$$

$$4x^3 + 9x^2 - 5x + 6$$

Ex. 3 Adding Polynomials

$$(x^2 - 8) - (7x + 4x^2)$$

Keep $\downarrow$ $+ (-7x - 4x^2)$

← change everything to the opposite

$$\begin{array}{r} 1x^2 + 0x - 8 \\ + -4x^2 - 7x + 0 \end{array}$$

$$\boxed{-3x^2 - 7x - 8}$$

Ex. 4 Adding Polynomials

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

Keep $+ (-2x^2 + 1x + 4)$

$$\begin{array}{r} 3x^2 - 5x + 3 \\ + -2x^2 + 1x + 4 \\ \hline x^2 - 4x + 7 \end{array}$$

Ex. 5 Adding Polynomials

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

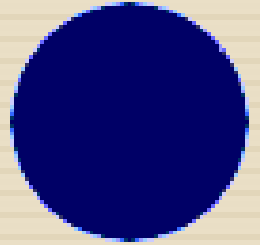
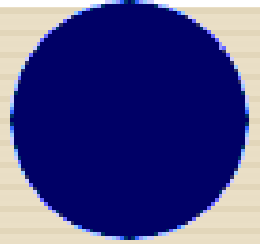
Keep $+ (2x^3 - 3x + 4)$

$$\begin{array}{r} -2x^3 + 5x^2 - x + 8 \\ + 2x^3 + 0x^2 - 3x + 4 \\ \hline 5x^2 - 4x + 12 \end{array}$$

Did We Reach Our Objective?



- add polynomials.
- subtract polynomials.



Homework



□ Section 7.5

□ $10 - 21$

□ $23 - 26$

$$27 + 29$$



Find each sum or difference.

10. $(y + 5) + (2y + 4y^2 - 2)$

12. $(3c^3 - c + 11) - (c^2 + 2c + 8)$

14. $(2x - 2y + 1) - (3y + 4x)$

16. $(x^2y - 3x^2 + y) + (3y - 2x^2y)$

18. $(5n - 2p^2 + 2np) - (4p^2 + 4n)$

20. $(6ab^2 + 2ab) + (3a^2b - 4ab + ab^2)$

11. $(2x + 3x^2) - (7 - 8x^2)$

13. $(z^2 + z) + (z^2 - 11)$

15. $(4a - 5b^2 + 3) + (6 - 2a + 3b^2)$

17. $(-8xy + 3x^2 - 5y) + (4x^2 - 2y + 6xy)$

19. $(4rxt - 8r^2x + x^2) - (6rx^2 + 5rxt - 2x^2)$

21. $(cd^2 + 2cd - 4) + (-6 + 4cd - 2cd^2)$

22. **PETS** From 1997 through 2007, the number of dogs D and the number of cats C (in hundreds) adopted from animal shelters in the United States are modeled by the following equations, where n is the number of years since 1997.

$$D = 2n + 3 \quad C = n + 4$$

- a. Write an equation that models the total number T of dogs and cats adopted in hundreds for this time period.
- b. If this trend continues, how many dogs and cats will be adopted in 2011?

Find each sum or difference.

23. $(4x + 2y - 6z) + (5y - 2z + 7x) + (-9z - 2x - 3y)$

24. $(5a^2 - 4) + (a^2 - 2a + 12) + (4a^2 - 6a + 8)$

25. $(3c^2 - 7) + (4c + 7) - (c^2 + 5c - 8)$

26. $(3n^3 + 3n - 10) - (4n^2 - 5n) + (4n^3 - 3n^2 - 9n + 4)$

**#'s 10 – 21,
23 – 26,
27, 29**