Mathematics 9
Section 5.3 – Adding Polynomials

We have looked at the different pieces of polynomials and how to group like terms. The good news is that when we add polynomials, it is basically the same as combining like terms.

Example 1: $(3n^2+2n+4)+(-5n^2+3n-5)$

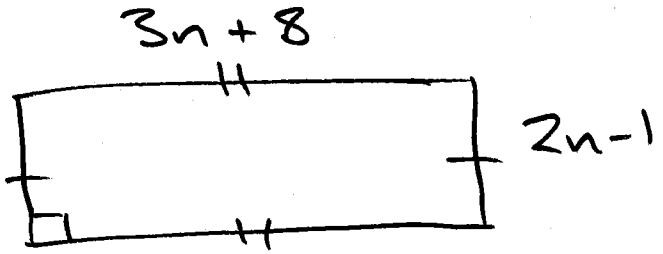
DROP THE BRACKETS

$3n^2+2n+4-5n^2+3n-5$

$-2n^2+5n-1$

Example 2:

Sometime we must use polynomials when we work with geometric shapes. If we are asked to find the perimeter (the distance around an object) of a rectangle like the on below, use the following steps:



$(3n+8)+(3n+8)+(2n-1)+(2n-1)$

perimeter $\Rightarrow 10n+14$

Homework: pg. 229
#5ac, 6ac, 8aceg, 9aceg, 10a
12, 14, 15ace, 16a

Part B: Simplify each expression by combining like terms (if possible).

Remember to place you answer in the proper format

1) $-6k + 7k$ = k

2) $12r^2 - 8r^4 - 12$
$-8r^4 + 12r^2 - 12$

3) $n^2 - 10 + 9n^2 - 3$
$10n^2 - 13$

4) $-4x - 10x$
$-14x$

5) $-r - 10r$ $-11r$

6) $-2x^3 + 11 + 6x^3$
$4x^3 + 11$

7) $11r - 12r$ $-1r$ or $-r$

8) $-v + 12v$ = $11v$

9) $-8x - 11x$
$-19x$

10) $4p^4 + 2p^4$
$6p^4$

11) $5n^8 + 11n^8$
$16n^8$

12) $n^2 + 4n - 9n - 5n^2$
$-4n^2 - 5n$

13) $12r^2 + 5r + 3r^2 - 5$
$15r^2 + 5r - 5$

14) $-5 + 9n + 6$
$9n + 1$

15) $n - 4 - 9$ = $n - 13$

16) $4n^3 - n^3$ = $3n^3$

17) $-3x^2 - 9 + 15x^2$
$12x^2 - 9$

18) $-9k + 8k$
$-1k$ or $-1k$

19) $-16n - 14n$
= $-30n$

20) $15n - 19n$
$-4n$

21) $-4 + 7(1 - 3m)$
$-4 + 7 - 21m$ $-21m + 3$

22) $-5n^2 + 3(6 + 7n^2)$
$-5n^2 + 18 + 21n^2 = 16n^2 + 18$

23) $-2n - 1(9 - 10n)$

24) $10 - 5(9n - 9)$

25) $9a^3 + 10(6a^3 - 1)$

26) $-9(6m - 3) + 6(1 + 4m)$

27) $-10(1 - 9x) + 6(x - 10)$

28) $5(-2n + 4) + 2(n + 3)$

29) $-3(10b + 10) + 5(b + 2)$

30) $-7(n + 3) - 8(1 + 8n)$

HAVE NOT TAUGHT YET

(21-30)
HAVE NOT LEARNED YET