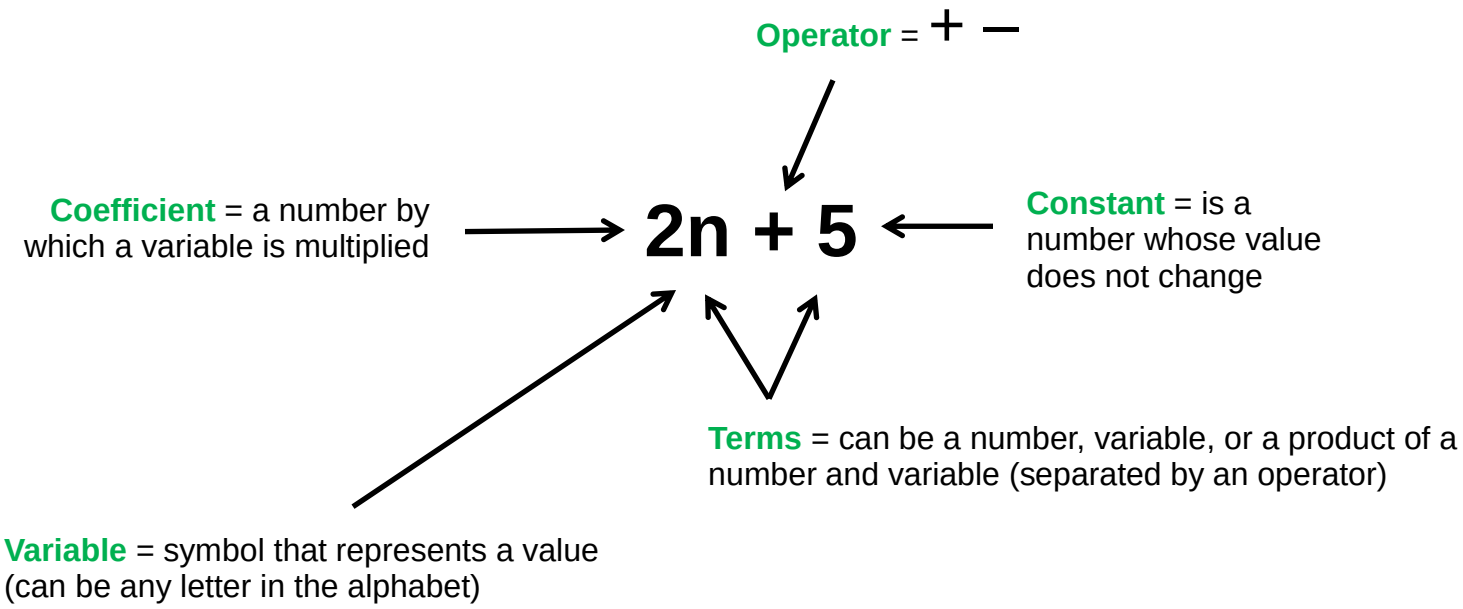
Name: **Hour:**

CHAPTER 2 STUDY GUIDE (EXPRESSIONS)



2.3 Distributive Property examples on pages 55-56 *(see Chapter 2.3 notes)*

- **Tips:** Distributive Property is used to multiply a single term outside the parentheses and two or more terms inside a set of parentheses.

1. 4(15)
2. 7(6x)
3. 9(2x + 4)
4. 5(3x – 2)
5. 3(–9x + 5)
6. –6(4y + 2)
7. –4(7y – 3)
8. –3(–8y + 6)
9. –8(–5y – 2)
10. 5(6x + 4y)

2.4 Evaluating Expressions examples on pages 59-60 *(see Chapter 2.4 notes)*

- **Tips:** To evaluate an algebraic expression, replace the variable with a given number and solve the expression where a = 4, b = –2, c = 3, d = –5.

11. 8a
12. 7b + 8
13. 6c + 12
14. 5d + (–25) – 10
15. –3a – (–5)
16. –16b –13
17. –4c – 9 – (– 14)
18. –2d – (–7) + 15

2.5 <u>Simplifying Expressions</u> examples on pages 62-65 *(see Chapter 2.5 notes)*

- **Tips: <u>Like Terms</u>** = are terms that have the same variable(s) and same exponents.
- **Tips:** Combine all like terms.

19. (a + 8) + 15

20. 3(2b + 5) + 7

21. 15c + 2(5c – 15) + 40

22. (–11d + 13) – 3d

23. –5(3x – 5) – (– 10p)

24. –2y – (–7y + 6m) + 16m + 4

2.6 <u>Translating Word Phrases</u> examples on pages 69-71 *(see Chapter 2.6 notes)*

- **Tips:** Memorize the following chart.

Addition Key Words	Subtraction Key Words	Multiplication Key Words	Division Key Words
added to sum increased by more than plus	subtracted from difference decreased by less than minus less	multiplied by product times twice (× 2) doubled (× 2)	divided by quotient ratio of halved (÷ 2)

25. 7 times a number, increased by 4

26. the difference of p and 9 plus 7m

27. 4 less than the product of 3 and x

28. 5 divided by the sum of 3 and 7

29. 2 multiplied by the sum of y and 6

30. the quotient of 21 and 7, minus 2

31. name all the addition & subtraction key terms

32. name all the multiplication & division key terms

2.7 <u>Estimating</u> examples on pages 74-77 *(see Chapter 2.7 notes)*

- **Tips: <u>Highest Place Value</u>** = round the number to the far left
- **Tips: <u>Front-End Estimation</u>** = use the far left digit only and make all other numbers zero
- **Tips:** To estimate a product, round each number to its highest place value.
- **Tips:** To estimate a quotient, the goal is to obtain a whole number for the answer.

33. 18.283 + 1.829 (round to the nearest ten**<u>th</u>**)

34. 3.084 – 2.924 (round to the nearest hundred**<u>th</u>**)

35. 23 + 165 (round to the nearest ten)

36. 7,877 + 1,501 (round to the nearest thousand)

37. 239 × 47 (estimate the product)

38. 477 ÷ 12 (estimate the quotient)

39. 3,355 + 461 (use highest place value)

40. 231 + 398 + 857 (use front-end estimation)