**Algebra Parts & Like Terms**

Name: Div.: Date:

Parts of an algebraic equation/expression:

**Term:** Part of an expression/equation separated by an operation (+/-/x/÷/ etc.)

**Variable:** Unknown Value represented by a letter

Note: a negative represents a coefficient of -1 in front of a variable!

**Coefficient:** Number that modifies a variable (x/÷)

**Constant:** A number not connected to a variable (+/-)

**Like Terms:** Terms that contain identical variables (x & x2 ; and xy & x2y both are not like terms because of the different exponents over the x’s)

**Simplify**: To combine like terms. Like terms can be added/ subtracted together following integer rules for each term. (Reorder equations based on a descending order of the power of the terms.)

\* **Note:** Zero principle states that two opposite integers sum is zero (-1 + 1 = 0)

**Name the variable, constant, coefficient, and number of terms in each of the following expressions:**

1. x + 8
2. $\frac{1}{4}$ - *a*
3. –k – 0.1
4. x – x2 – 3
5. $\frac{x}{2}$ + 4x – 3y
6. 1 – 5c + 4d
7. 5x – 2y + 2z2
8. $\frac{1}{2}x$ + 2 - 3z3
9. $\frac{x}{2}$ + 2y - 5 + 4z
10. $\frac{x}{5}$ + b - 6 + 5g2

**Simplify by using the zero principle mathematically and demonstrate by using algebra tiles:**

1. 11t – t
2. 10b – 13b
3. –21s + 12s
4. 11a – 10a – 5a
5. – 8q – 9q + 10q
6. 2x – 5x – 7
7. 5c + d – 2c – d
8. – 5x + 5y + 5x – y
9. 5x + 10 + 5y – 3x + 1
10. – 7t + 2 + 8r + 9r – 8t
11. 8r – 11 – 18q + 5p + 7q
12. –p +5q –8r –q +3p +9r +1
13. 13j – 18d + 5d2 – 12j
14. 6h2 – 5h2 + 9 – 5h + 2h
15. – 5r2 + 4r2 + 8 – 7

|  |  |  |  |
| --- | --- | --- | --- |
| +1 | -1 | +7 | -7 |
| +2 | -2 | +8 | -8 |
| +3 | -3 | +9 | -9 |
| +4 | -4 | +10 | -10 |
| +5 | -5 | +11 | -11 |
| +6 | -6 | +12 | -12 |
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