

**Equivalent Expressions** Assignment

Math 6

**Part A:** Fill in the blanks with words or phrases that will make each statement true.

1. Expressions that may look different but will have the same result if calculated are called \_\_\_\_\_.
2. \_\_\_\_\_ are terms that have the same variables raised to the same power or exponent, can have different coefficients and can be combined.
3. \_\_\_\_\_ is the process of getting the factors of any given product.
4. The \_\_\_\_\_ the highest factor that is common in two or more given numbers.
5. \_\_\_\_\_ is a tool used to break down any given number into its prime factors.

**Part B:** Cross out the term that **DOES NOT** belong to each set.

1.  $p$        $3p$        $-4p$        $5q$        $12p$

2.  $5a^2b^3$        $9a^2b^3$        $16a^2b^3$        $-5a^2b^3$        $-a^2b^2$

3.  $7mnp$        $10mnp^2$        $21mnp$        $10mnp$        $-9mnp$

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**Part C:** Determine if the given expressions are equivalent given the value of the variable.

1.  $7a - 5a + 3$  and  $3 + 2a$ , for  $a = 2$

2.  $3(7g + 5h)$  and  $21g + 15h$ , for  $g = 2$  and  $h = -1$

**Part D:** Combine like terms to generate equivalent expressions.

1.  $24y + 8y$

2.  $10 - 5g + 8 + 8g$

3.  $10f + 4 - 7d - 3 + 8d - 9f$

4.  $9xy + 12xz - 4yz + 5xz - 8xy$

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**Part E:** Write equivalent expressions in factored form using the greatest common factor and the distributive property.

1.  $12z + 24y$

2.  $abc + abd - abe$

3.  $8gh - 8hk$

4.  $14mn + 28mp + 7m$

**Part F:** Use the distributive property to write equivalent expressions in standard form.

1.  $8(4a + 3b)$

2.  $5x(3y - 7z)$

3.  $7pq(1 + 2r)$

4.  $5ab(c + d - e)$