**Use the expression below to answer questions 1-6.**

$$13g^{4}+12h-\frac{7}{9}i+28$$

1. coefficient \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. constant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. variable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. exponent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. difference \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. True/False: The expression above can be simplified. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. Which of the following expressions show a **quotient** of two terms?

 A. $6\left(9\right)÷8y$

 B. $2\left(6x-14\right)$

 C. $1.5\left(4m\right)$

 D. $7+8a^{3}$

8. Simplify the expression.

$7(n+4p)+18n$

|  |  |  |
| --- | --- | --- |
| **Expression 1** | **Expression 2** | **Expression 3** |
| $$5(12+g)$$ | $$12+5g$$ | $$60+5g$$ |

9. Which expressions are equivalent?

10. Simplify the expression.

$8m^{4}+​​​​11w+16+3m^{4}-2w$

11. Sammy was asked to combine like terms in the expression: $9y+3-7y+9+2y^{2}$

 He came up with the answer: 2$y^{2}+16y+12$

What mistake did Sammy make?

12. Write an expression equivalent to 40*x* + 8? (Use the factor sled)