

Math Vocabulary and Notation Practice Answers

1. 4 terms
2. 2 terms
3. 5 terms
4. 3 terms
5. 1 term
6. Yes, this is a polynomial. All of the powers of x are positive, whole numbers.
7. Yes, this is a polynomial. All of the powers of x are positive, whole numbers.
8. No, this is not a polynomial. Not all powers of x are positive whole numbers, as $\sqrt{x} = x^{1/2}$.
9. No, this is not a polynomial. Not all powers of x are positive whole numbers, as this expression contains x^{-3} .
10. Yes, $\frac{8}{9}$ is a polynomial containing only one term. It can be thought of as $\frac{8}{9}x^0$, and there are no variables with negative powers or negative powers that are not whole numbers.
11. If you have the value of x , you would start by doing addition (as it is inside Parentheses) and evaluate the $x+3$. To SIMPLIFY, you would start by removing the parentheses by distributing the -6 , resulting in $7 - 6x - 18$.
12. If you have the value of x , you would start by doing addition (as it is inside Parentheses) to evaluate the $x + 3$ and the $x - 1$. To SIMPLIFY, you would start by removing the parentheses by distributing the 2 and the -4 , resulting in $2x + 6 - 4x + 1$. These can both be done at the same time.
13. You would start with the addition of $4 + 25 = 29$. This is because a root cannot be distributed inside of an addition. The root symbol acts as implied parentheses.
14. You would multiply the 2 times the x in the numerator. When division is written in this way, there are implied Parentheses around the numerator and the denominator. So we start by dealing with the $2x + 3$ in those parentheses. As Multiplication comes before Addition, we start with the $2x$.
Note that, if we don't have the value of x , and we want to SIMPLIFY this, we could start by finding a common denominator and adding together the fractions: $\frac{2x+3}{2} + 4 = \frac{2x+3}{2} + \frac{8}{2} = \frac{2x+3+8}{2} = \frac{2x+11}{2}$. The first thing we would do to EVALUATE, though, would be to multiply the 2 times x .
15. FALSE. 5 is not a FACTOR of the whole numerator and thus cannot be canceled in this way. Only FACTORS can be canceled between a numerator and a denominator.
16. TRUE. When there is one term in the denominator, it can be distributed to the terms in the numerator. $\frac{3x+1}{x} = \frac{3x}{x} + \frac{1}{x} = 3 + \frac{1}{x}$. Once the denominator has been distributed, x is a factor of both the numerator and the denominator of the first term and can this be canceled.
17. FALSE. In this case, something like this was done: $\frac{2x+1}{x^2+1} = \frac{2+1}{x+1} = \frac{3}{x+1}$. In this case, the x is neither a factor of the numerator nor the denominator and can thus not be canceled.

18. FALSE. Roots cannot be distributed inside of addition and subtraction.
We could think of there being parentheses inside a square root. We also know that a square root is the same as a power of $\frac{1}{2}$, and powers CANNOT be distributed inside parentheses.
19. 5 less than 4 times x , all divided by 2.
20. 1 more than x , all divided by 1 less than 2 times x .
21. 2 more than x all times 5 times x , all less than 4.
22. 7 more than, 2 times x divided by y
23. Let $x =$ the larger number and $y =$ the smaller number.
Equation 1 : $x + y = 21$
Equation 2 : $3y = 2x - 2$
The larger number is $x = 13$, and the smaller number is $y = 8$.
24. $x = 3 * \frac{1}{4}(13 - 4) = \frac{27}{4}$
25. $x = 5(y + 6) - 3$