

SAT Polinomlar ve arpanlara Ayırma Nedir?

alıřma Kağıdı

Polinomlar, deęiřkenler ve katsayılarından oluřan ifadelerdir. arpanlara ayırma ise bu ifadeleri daha basit arpımlara dnřtrme iřlemidir. SAT'te bu iki konudan hem temel iřlemler hem de denklem zme řeklinde sorular gelir.

Sorular

1. Which of the following is a polynomial?

- A) $\frac{1}{x} + 2$
- B) $x^2 - 3x + 5$
- C) $\sqrt{x} + 1$
- D) 2^x

2. If $(x-3)(x+5) = x^2 + ax + b$, what is the value of a ?

- A) -15
- B) -2
- C) 2
- D) 8

3. What is the factored form of $x^2 + 6x + 9$?

- A) $(x+3)(x-3)$
- B) $(x+6)(x+3)$
- C) $(x+3)^2$
- D) $(x-3)^2$

4. If $(x+a)(x+b) = x^2 + 5x + 6$, what is the value of $a+b$?

5. Factor the expression: $x^2 - 9$

6. If $x^2 + 2x - 8 = 0$, what are the possible values of x ?

7. Tanımla: What is a polynomial?

8. Tanımla: What is factoring?

9. Tanımla: Difference of Squares Formula: $a^2 - b^2$

Cevap Anahtarı

1. B) $x^2 - 3x + 5$ — A polynomial contains variables raised to non-negative integer powers. $x^2 - 3x + 5$ fits this definition.
2. C) 2 — Expanding $(x-3)(x+5)$ gives $x^2 + 5x - 3x - 15 = x^2 + 2x - 15$. Comparing coefficients, $a=2$.
3. C) $(x+3)^2$ — This is a perfect square trinomial. $x^2 + 6x + 9 = (x+3)^2$.
4. 1. Expand the left side of the equation: $(x+a)(x+b) = x^2 + bx + ax + ab = x^2 + (a+b)x + ab$. 2. Compare the expanded form with the right side of the equation: $x^2 + (a+b)x + ab = x^2 + 5x + 6$. 3. By comparing the coefficients of x , we see that $a+b = 5$. 4. By comparing the constant terms, we see that $ab = 6$. 5. The question asks for the value of $a+b$, which is 5.
5. 1. Recognize this as a difference of squares, which has the form $a^2 - b^2$. 2. In this case, $a=x$ and $b=3$, since $x^2 = x^2$ and $9 = 3^2$. 3. The difference of squares factors as $(a-b)(a+b)$. 4. Therefore, $x^2 - 9 = (x-3)(x+3)$. 5. This factored form is often useful for solving equations or simplifying expressions.
6. 1. Factor the quadratic expression $x^2 + 2x - 8$. We need two numbers that multiply to -8 and add to 2. These numbers are 4 and -2. 2. So, the factored form is $(x+4)(x-2) = 0$. 3. For the product of two factors to be zero, at least one of the factors must be zero. 4. Set each factor equal to zero: $x+4 = 0$ or $x-2 = 0$. 5. Solve for x in each case: $x = -4$ or $x = 2$. 6. The possible values of x are -4 and 2.
7. An expression consisting of variables and coefficients, involving only the operations of addition, subtraction, multiplication, and non-negative integer exponentiation of variables.
8. The process of finding expressions that can be multiplied together to produce the original expression.
9. $(a-b)(a+b)$

Bounlu

Tüm kartlar, adım adım çözümler ve AI hoca desteği Notek uygulamasında.
Sınav tarihlerini Promy otomatik hatırlatıcıya çevirir.