

# Степень с целым показателем и ее свойства

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- **Обобщить и систематизировать знания о степени с целым показателем;**
- **закрепить и усовершенствовать навыки применения свойств степени с целым показателем;**
- **развивать навыки выполнения простейших преобразований выражений, содержащих степени с целым показателем.**

# Представьте выражение в виде степени

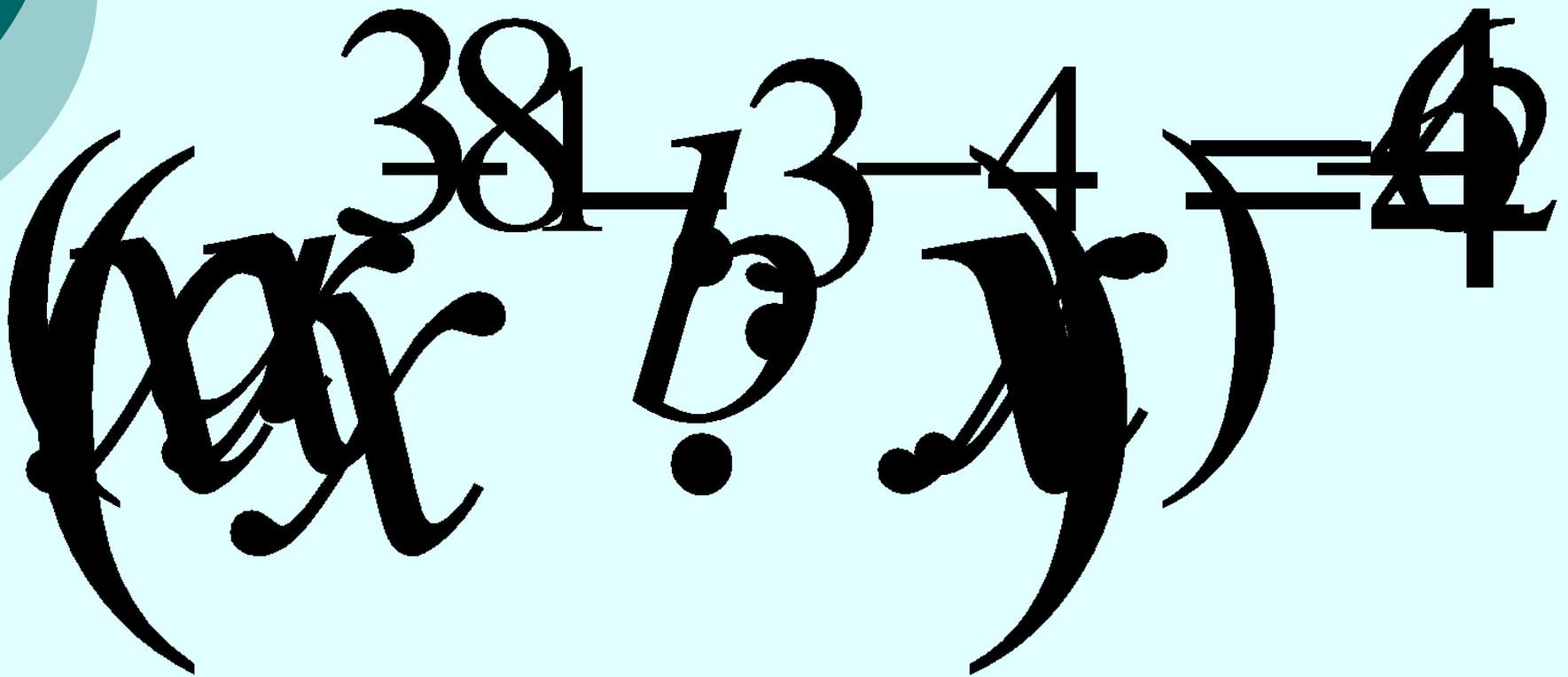
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1

$$\frac{1}{(x^2 + y^2)^2}$$

# Упростите

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Представьте выражение  $x^{-12}$  в виде произведения двух степеней с основанием  $x$ , если один множитель известен.

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$$\frac{x^{-1}}{2}$$

|           |       |
|-----------|-------|
| $x^{-2}$  |       |
|           | $x^5$ |
| $x^{14}$  |       |
|           | $x$   |
| $x^{-18}$ |       |

# Вычислите

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$$2^{-18} \left( \frac{5^{-10}}{9^{-12}} \right)^{\frac{34}{2}} - 32$$
$$5^{-37} \cdot 5^{-4} - 5$$

# Расположите в порядке убывания

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**$0,2^{-6}; 0,2^0; 0,2; (0,2)^{-4}; 0,2^3$**

# При каких значениях $x$ верно равенство

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The image shows a complex mathematical equation with calligraphic numbers and variables. The equation is written in a highly decorative, black, calligraphic font. It features several numbers and variables arranged in a way that suggests a mathematical relationship. The numbers are 3, 2, 40, 16, 2, 4, 8, and 16. The variables are  $x$  and  $x$ . The equation is structured as follows:  $3 \cdot 2 \cdot 40 = x \cdot x \cdot 2 \cdot 4 \cdot 8 \cdot 16$ . The numbers 3, 2, and 40 are grouped together on the left side of the equation, and the numbers 2, 4, 8, and 16 are grouped together on the right side. The variables  $x$  and  $x$  are placed between the two groups of numbers. The equation is written in a way that suggests a mathematical relationship, but the numbers and variables are arranged in a way that is difficult to interpret. The numbers 3, 2, and 40 are grouped together on the left side of the equation, and the numbers 2, 4, 8, and 16 are grouped together on the right side. The variables  $x$  and  $x$  are placed between the two groups of numbers. The equation is written in a way that suggests a mathematical relationship, but the numbers and variables are arranged in a way that is difficult to interpret.