

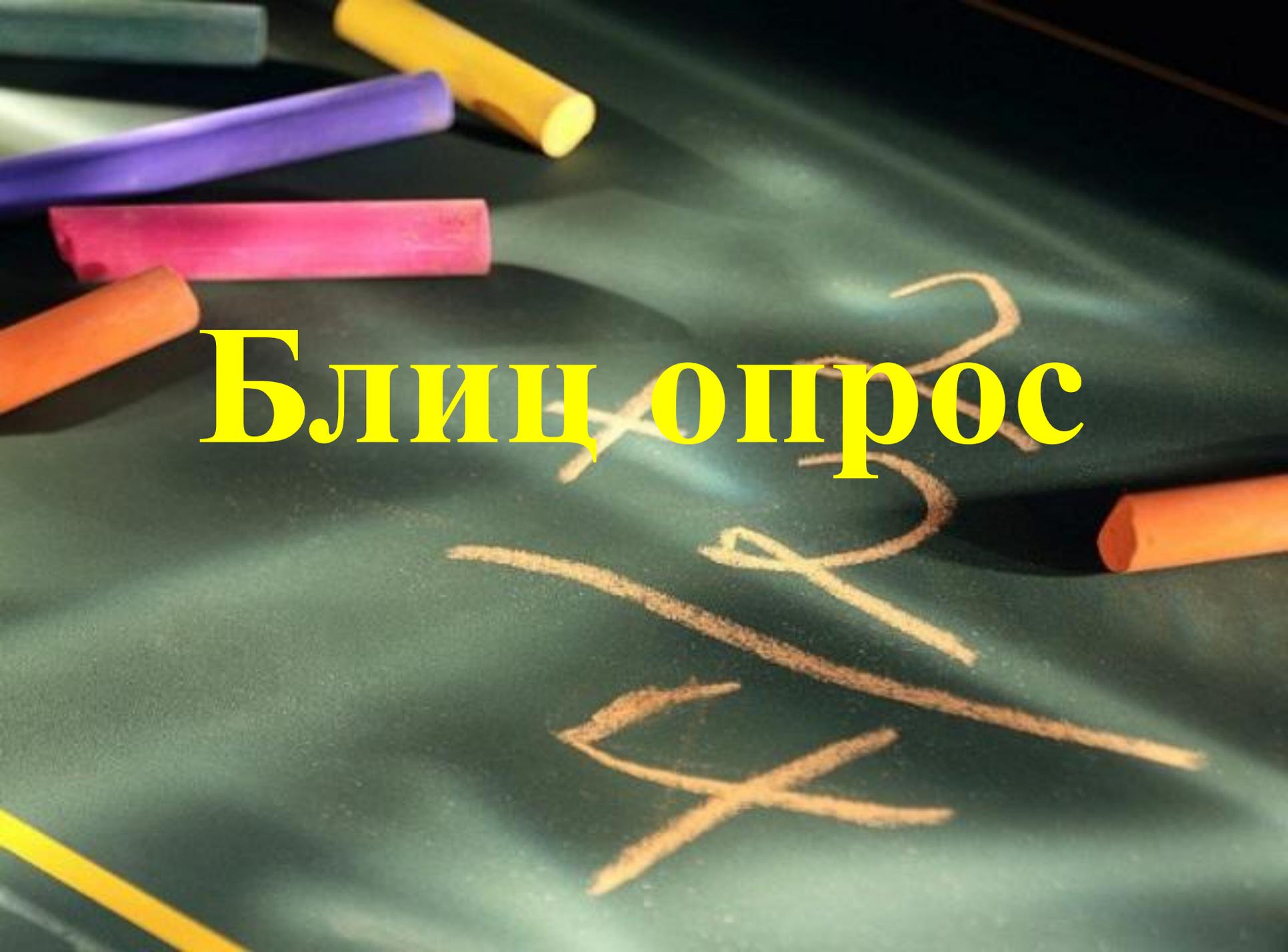
ОГБОУ СПО Ульяновский Авиационный колледж

Урок-игра

«Логарифмический квест»

ПРЕПОДАВАТЕЛЬ МАТЕМАТИКИ,
ВЫСШЕЙ КВАЛИФИКАЦИОННОЙ
КАТЕГОРИИ
ЯКОВЛЕВА ИРИНА ВИКТОРОВНА





Блиц опрос

$$1) \log_2 8 = 3$$

$$2) 3^2 = 9$$

$$3) 2^0 = 1$$

$$4) \log_6 6 = 1$$

$$5) 3^x = 27$$
$$x = 3$$

$$6) \log_{10} 0.1 = -1$$

$$7) 5^1 = 5$$

$$8) 4^{\log_4 7} = 7$$

$$9) \log_5 25 = 2$$

$$10) \log_3 1 = 0$$

$$11) \log_4 64 = 3$$

$$12) \log_5 5^{10} = 10$$

Найти соответствие



Степенная функция

$$y = 2^x$$
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$$y = 2^x$$

Показательная функция

$$y = 2^x$$
$$y = 2^x$$
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$$y = 2^x$$

Логарифмическая функция

$$y = 2^x$$
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A group of business professionals in suits are holding up white cards with large black question marks. The scene is brightly lit, suggesting an office or conference room. The focus is on the hands and the question marks, with the people's faces blurred in the background.

Вычислите

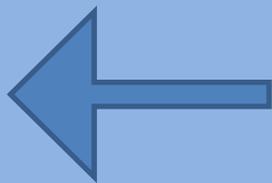
Укажите уравнение, корнем которого является логарифм числа 5 по основанию 3:

а) $5^x = 3$

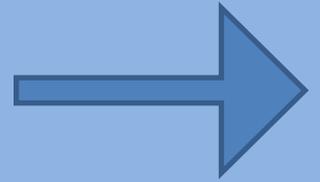
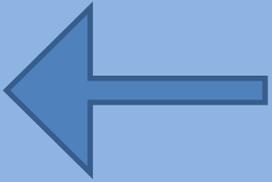
в) $3^x = 5$

б) $x^5 = 3$

г) $x^3 = 5$



$$B) 3^x = 5$$

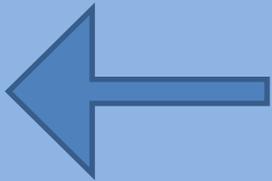


Выберите выражение, которое не имеет
смысла:

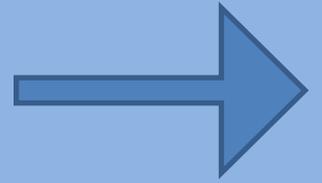
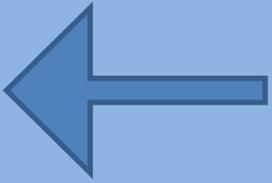
а) $\log_1 3$

б) $\log_8 2^{-3}$

в) $\log_3 1$



a) $\log_1 3$

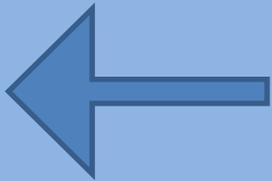


Выберите выражение, которое имеет
СМЫСЛ:

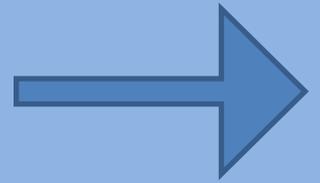
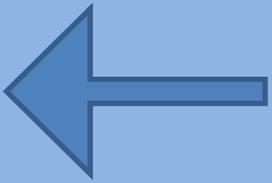
а) $3^x = -9$

б) $5^x = \frac{1}{25}$

$y = 2^x$



$$6) 5^x = \frac{1}{25}$$





Выбирай, собирай, клей!



Выбирай, собирай, клей!

$$(a^n)^m = a^{n \cdot m}$$

$$\sqrt[n]{a^n} = a$$

$$a^0 = 1$$

$$a^n \cdot a^m = a^{n+m}$$

$$\log_a b^n = n \cdot \log_a b$$

$$a^{\log_a b} = b$$

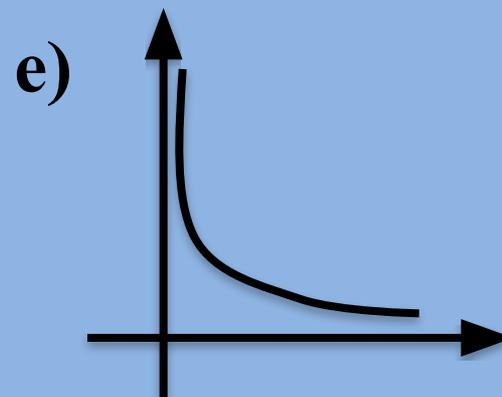
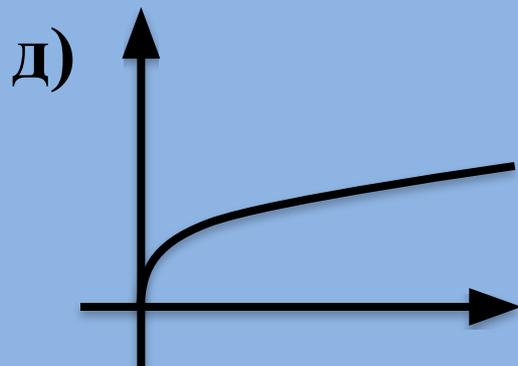
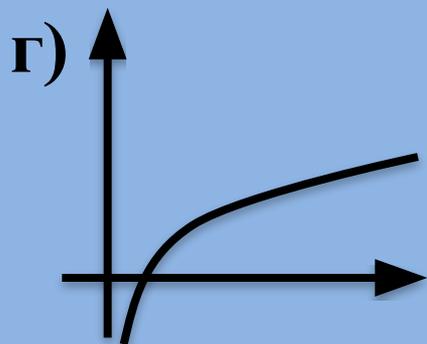
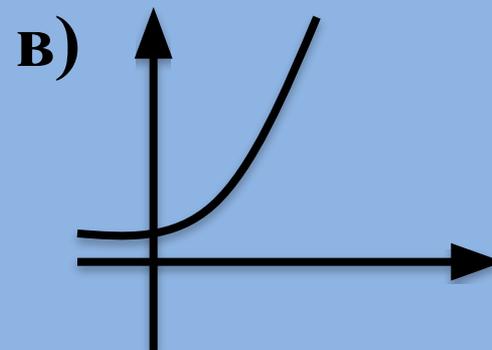
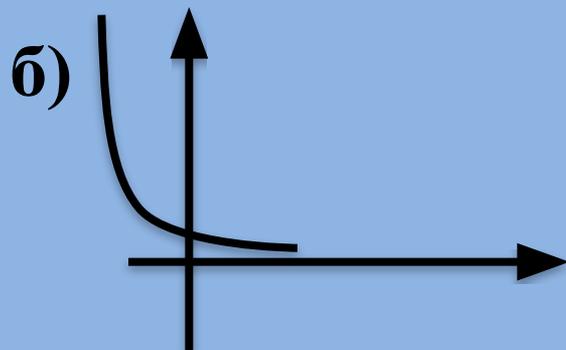
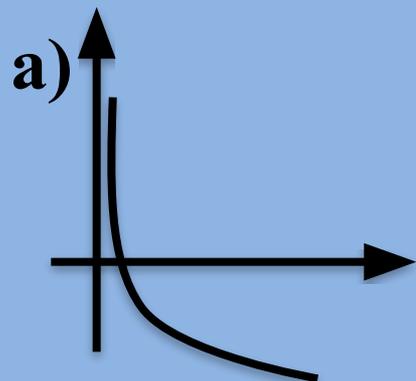
$$\log_a b = \frac{\log_x b}{\log_x a}$$

$$\sqrt[n]{\sqrt[m]{a}} = \sqrt[n \cdot m]{a}$$

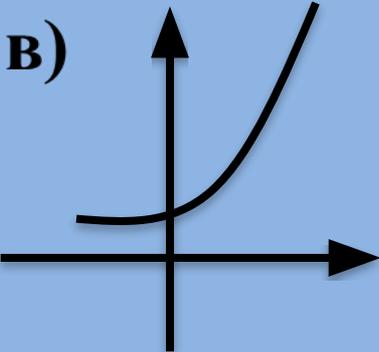
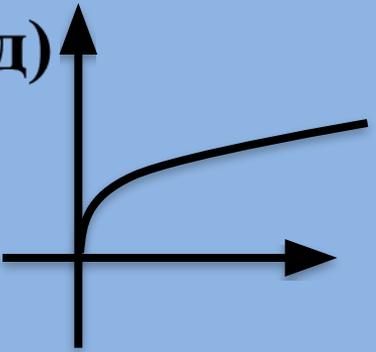
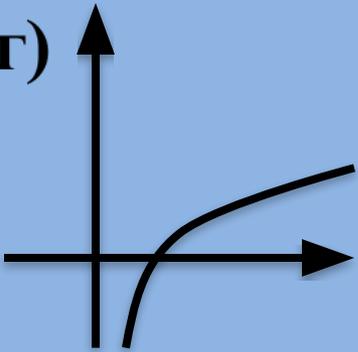
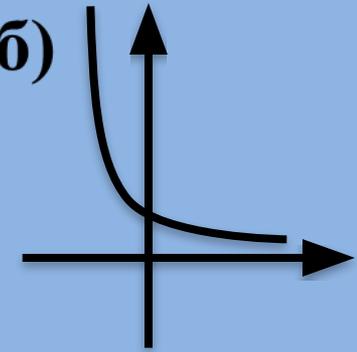


Графики функций

| | | | |
|-----------|----------------|----------------|----------------------------------|
| $y = 5^x$ | $y = \sqrt{x}$ | $y = \log_2 x$ | $y = \left(\frac{5}{7}\right)^x$ |
| | | | |



Графики функций

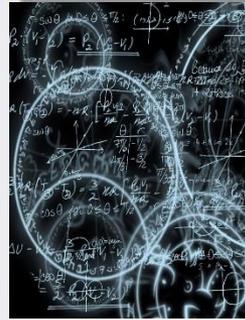
| | | | |
|---|---|--|---|
| $y = 5^x$ | $y = \sqrt{x}$ | $y = \log_2 x$ | $y = \left(\frac{5}{7}\right)^x$ |
| в)  | д)  | г)  | б)  |

Узнай меня!



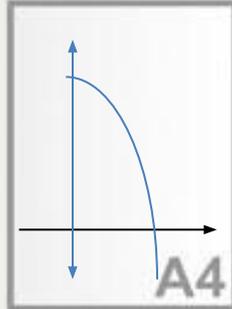
$$\frac{a+b}{2} \geq \sqrt{ab}$$
$$\sum \omega$$
$$\log_b a$$
$$\sin \alpha$$
$$(1+x)^n \geq 1+nx$$

$$y = 2^x$$



$$y = 2^x$$

A5



$$y = 2^x$$



Степенное (4)

Показательное (3)

Логарифмическое (2)

Нестрогое (1)

НЕРАВЕНСТВО

Линейная (4)

Степенная (3)

Показательная(2)

Логарифмическая(1)

ФУНКЦИЯ

Возведение в степень (4)

Извлечение корня (3)

Вычисление логарифма
(2)

Деление (1)

Арифметические
действия



**СПАСИБО ЗА
ВНИМАНИЕ!**

