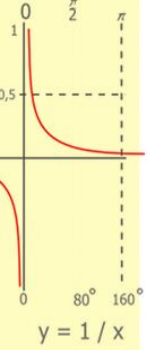
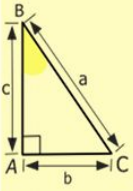
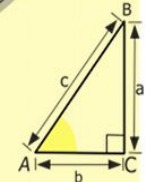
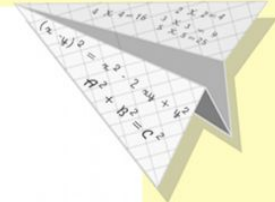
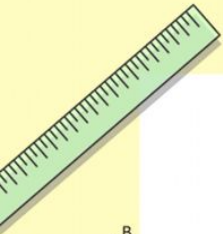


# Здравствуйте ребята!

## Запишите:

### 26.10.21 Классная работа.

# Тема: «Преобразование выражений содержащих степень с отрицательным целым показателем».



$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 2100 \\ + 8400 \\ \hline 105000 \end{array}$$

- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
- 5 x 5 = 25
- 6 x 6 = 36
- 7 x 7 = 49
- 8 x 8 = 64
- 9 x 9 = 81



$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

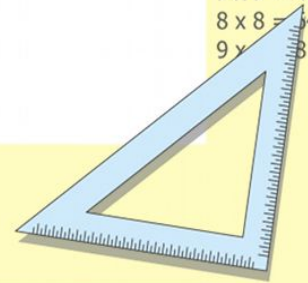
$$\sin 90^\circ = 1$$



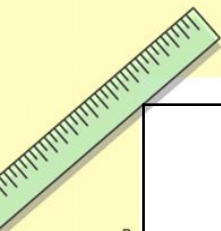
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

$$(x+y)(x-y) = x^2 - y^2$$



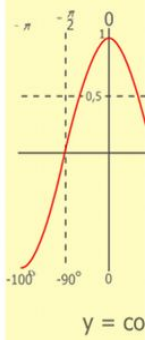
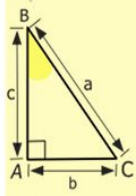
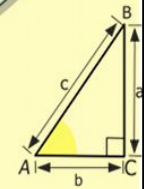
# УСТНО



32

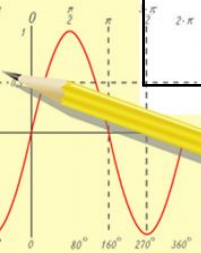
64

0,36



$$\begin{array}{r} 1 \\ \times 2500 \\ \hline 2500 \\ + 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$

- $2 \times 2 = 4$
- $3 \times 3 = 9$
- $4 \times 4 = 16$
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$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

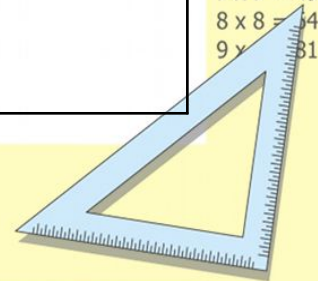
$$\sin 90^\circ = 1$$



$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

$$(x+y)(x-y) = x^2 - y^2$$



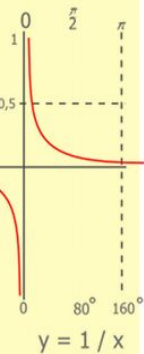
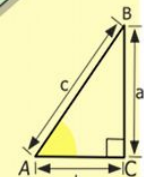
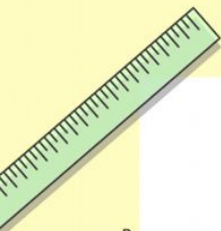
# Повторение

Свойства степени с натуральным показателем

$$x^3 \cdot x^5 = x^{3+5} = x^8$$

$$a^7 : a^4 = a^{7-4} = a^3$$

$$(y^5)^3 = y^{5 \cdot 3} = y^{15}$$



$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 10500 \end{array}$$



$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

$$\sin 90^\circ = 1$$

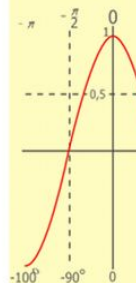
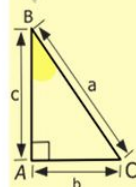


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 + 45 \end{cases}$$

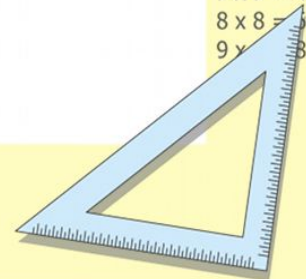
$$(x+y)(x-y) = x^2 - y^2$$

$$x = 70$$



$$y = \cos$$

- 2 x 2 = 4
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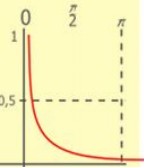
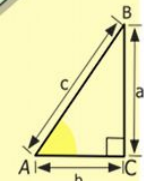
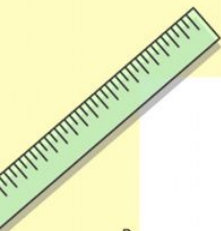


# Повторение

Свойства степени с натуральным показателем

$$(4b)^2 = 4^2 b^2 = 16b^2$$

$$\left(\frac{x^4}{3}\right)^3 = \frac{(x^4)^3}{3^3} = \frac{x^{12}}{27}$$



$y = 1/x$

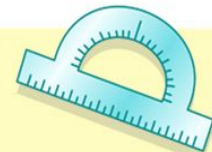
$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 10500 \end{array}$$



$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

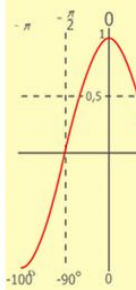
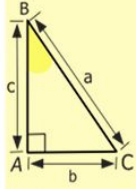
$\sin 90^\circ = 1$



$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

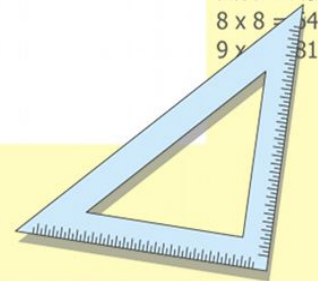
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

$$(x+y)(x-y) = x^2 - y^2$$

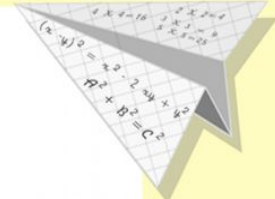
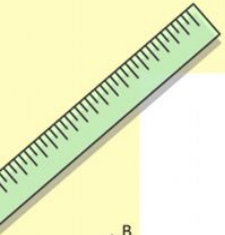


$y = \cos$

- $2 \times 2 = 4$
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- $4 \times 4 = 16$
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- $7 \times 7 = 49$
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- $9 \times 9 = 81$

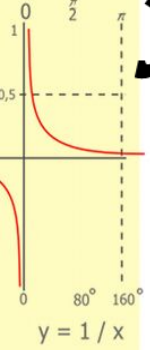
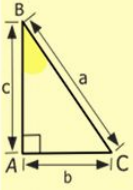
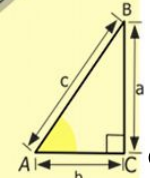


# Повторение



$$x^3 : x^3 = x^0 = 1$$

$$y^3 : y^4 = y^{-1}$$



$\begin{array}{r} 1 \\ 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$

- 2 x 2 = 4
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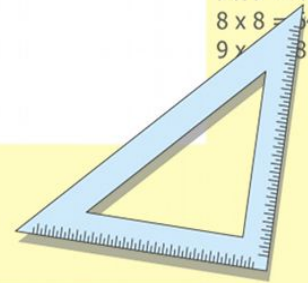
$$\sin 90^\circ = 1$$



$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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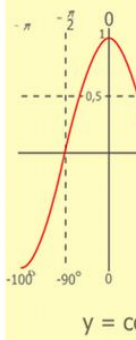
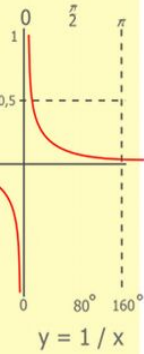
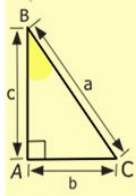
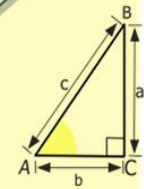
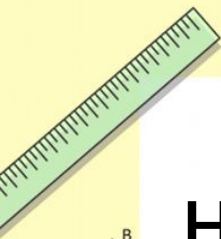
$$(x+y)(x-y) = x^2 - y^2$$



Любое человеческое знание начинается с интуиции, переходит к понятиям и завершается идеями.

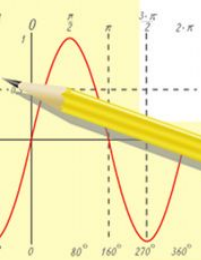
И. Кант

$$y^3 : y^4 = y^{-1}$$



$\begin{array}{r} 1 \\ 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 10500 \end{array}$

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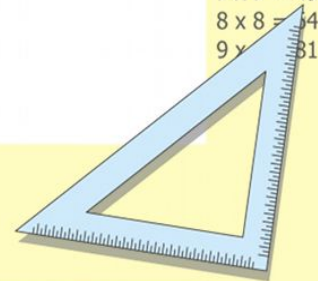
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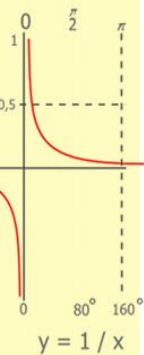
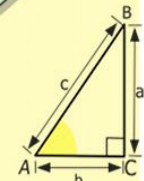
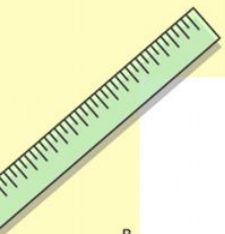


# Открытие

## Степень с отрицательным целым показателем

$$\frac{2^5}{2^8} = 2^{5-8} = 2^{-3}$$

$$\frac{2^5}{2^8} = \frac{2^5 : 2^5}{2^8 : 2^5} = \frac{1}{2^3}$$



$$\begin{array}{r} 1 \\ \times 2500 \\ \hline 2500 \\ + 210 \\ \hline 105000 \end{array}$$



$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

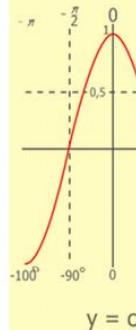
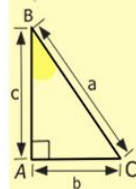
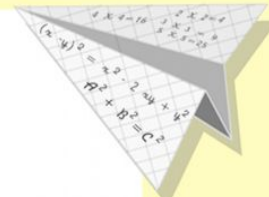
$$\sin 90^\circ = 1$$



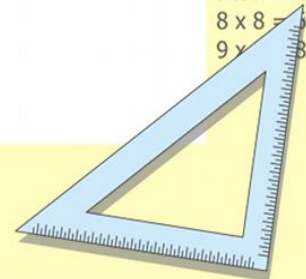
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# Работаем вместе

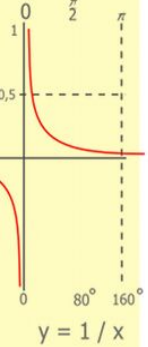
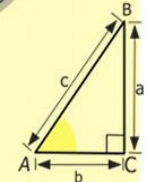
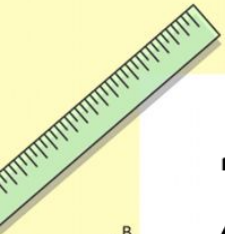
$$\frac{2^5}{2^8} = 2^5 : 2^8 = 2^{-3} = \frac{1}{2^3}$$

Выполните по аналогии:

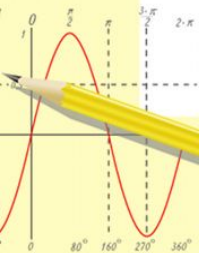
А)  $5^5 : 5^9$ ;

Б)  $a^2 : a^3$ .

Сделайте вывод:  $a^{-n} = ?$



$$\begin{array}{r} 1 \ 2 \ 5 \ 00 \\ \times 4 \ 2 \\ \hline 21 \ 0 \\ + 84 \phantom{0} \\ \hline 105 \ 0 \ 00 \end{array}$$



$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

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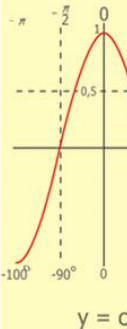
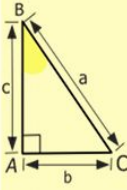
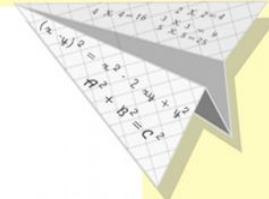
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$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

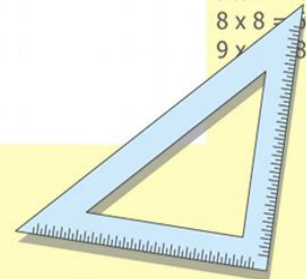
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$$(x+y)(x-y) = x^2 - y^2$$



$$y = \cos$$

$$\begin{array}{l} 2 \times 2 = 4 \\ 3 \times 3 = 9 \\ 4 \times 4 = 16 \\ 5 \times 5 = 25 \\ 6 \times 6 = 36 \\ 7 \times 7 = 49 \\ 8 \times 8 = 64 \\ 9 \times 9 = 81 \end{array}$$

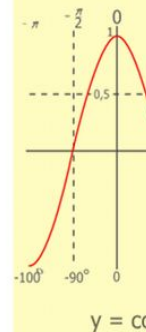
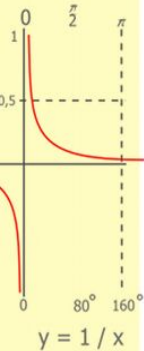
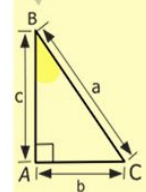
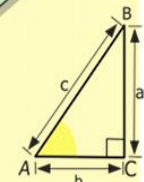
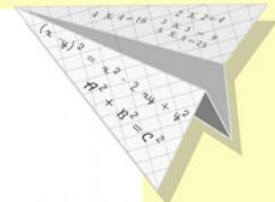
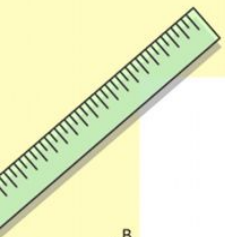




# Определение

## Степень с отрицательным целым показателем

$$a^{-n} = \frac{1}{a^n}, a \neq 0$$



$$\begin{array}{r} 1 \\ 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$

- $2 \times 2 = 4$
- $3 \times 3 = 9$
- $4 \times 4 = 16$
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$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

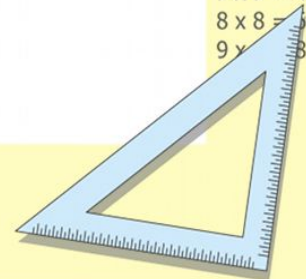
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$$(x+y)(x-y) = x^2 - y^2$$

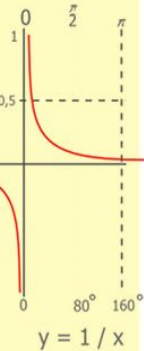
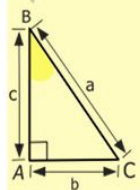
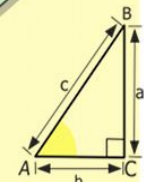
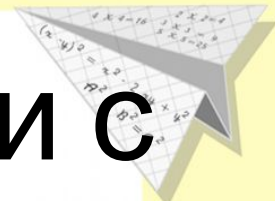
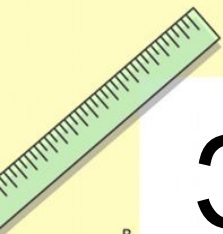


# Работаем вместе

Запишите в виде степени с  
положительным  
показателем следующее  
выражение:

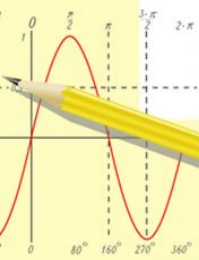
А)  $(x + y)^{-3}$ ;

Б)  $(m - n)^{-2}$ .



$$\begin{array}{r} 1 \\ 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$

$$\begin{array}{l} 2 \times 2 = 4 \\ 3 \times 3 = 9 \\ 4 \times 4 = 16 \\ 5 \times 5 = 25 \\ 6 \times 6 = 36 \\ 7 \times 7 = 49 \\ 8 \times 8 = 64 \\ 9 \times 9 = 81 \end{array}$$



$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

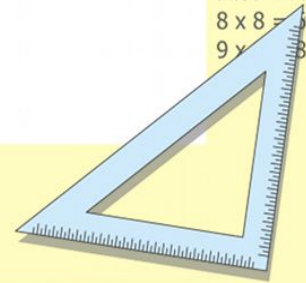
$$\sin 90^\circ = 1$$



$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

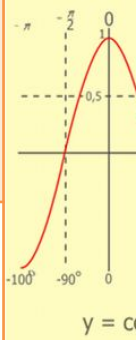
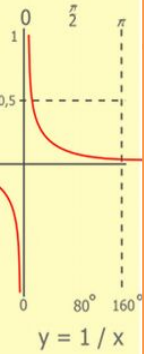
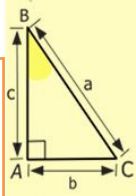
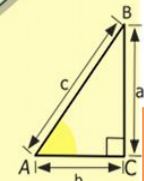
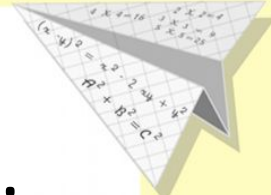
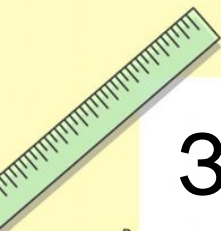
$$(x+y)(x-y) = x^2 - y^2$$



# Работаем самостоятельно

Замените степень с целым отрицательным показателем дробью:

№	Вариант 1	Вариант 2
1.	$3^{-2} = \frac{1}{3^2}$	$5^{-3} = \frac{1}{5^3}$
2.	$b^{-3} = \frac{1}{b^3}$	$d^{-4} = \frac{1}{d^4}$
3.	$(a + d)^{-4} = \frac{1}{(a + d)^4}$	$(c - b)^{-2} = \frac{1}{(c - b)^2}$



$$\begin{array}{r} 1\ 2\ 5\ 00 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105\ 000 \end{array}$$

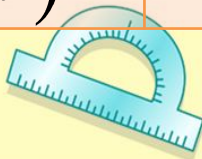
- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
- 5 x 5 = 25
- 6 x 6 = 36
- 7 x 7 = 49
- 8 x 8 = 64
- 9 x 9 = 81



$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

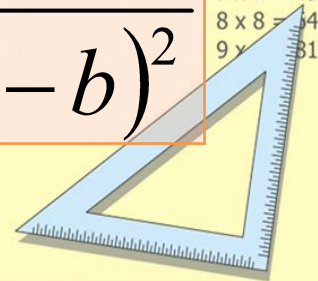
$$\sin 90^\circ = 1$$



$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

$$(x+y)(x-y) = x^2 - y^2$$



# Отдыхаем

*«Нельзя быть математиком,  
не будучи поэтом в душе»*

К. Вейерштрасс

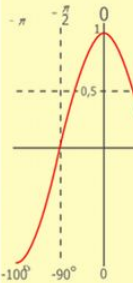
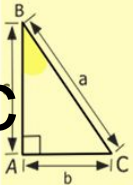
Если минус нам не нравится,  
С этим горем можно  
справиться:

Знак меняем в показателе,

Степень пишем в  
знаменателе,

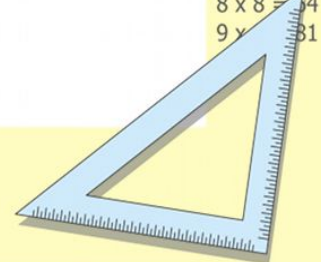
Сверху ставим единичку.

Получается? Отлично!



$$y = \cos$$

- $2 \times 2 = 4$
- $3 \times 3 = 9$
- $4 \times 4 = 16$
- $5 \times 5 = 25$
- $6 \times 6 = 36$
- $7 \times 7 = 49$
- $8 \times 8 = 64$
- $9 \times 9 = 81$

A vertical strip on the left side of the slide containing various mathematical elements: a ruler at the top, a graph of  $y = 1/x$  with x-axis labels  $80^\circ$  and  $160^\circ$ , a multiplication table showing  $2500 \times 42 = 21084$ , a sine wave graph with x-axis labels  $0, 80^\circ, 160^\circ, 270^\circ, 360^\circ$ , and a yellow pencil pointing towards the bottom right.

$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

$$\sin 90^\circ = 1$$

$$\begin{cases} y = 25x + 45 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 - 45 \end{cases}$$

$$\begin{cases} x = 25 - 45 \\ x = 70 \end{cases}$$

$$(x+y)(x-y) = x^2 - y^2$$

# Работаем устно

$$1) \left(\frac{3}{7}\right)^{-2} = 1 : \left(\frac{3}{7}\right)^2 = 1 \cdot \left(\frac{7}{3}\right)^2 = \left(\frac{7}{3}\right)^2 = \frac{49}{9} = 5\frac{4}{9}.$$

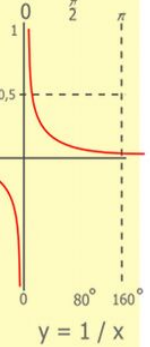
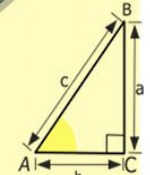
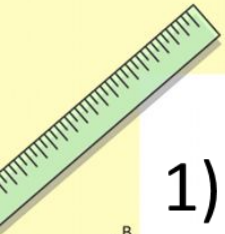
$$2) \left(\frac{1}{5}\right)^{-3} = 1 : \left(\frac{1}{5}\right)^3 = 1 \cdot \left(\frac{5}{1}\right)^3 = \left(\frac{5}{1}\right)^3 = \frac{125}{1} = 125.$$

$$3) \left(\frac{2}{5}\right)^{-3} = 1 : \left(\frac{2}{5}\right)^3 = 1 \cdot \left(\frac{5}{2}\right)^3 = \left(\frac{5}{2}\right)^3 = \frac{125}{8} = 15\frac{5}{8}.$$

$$4) \left(\frac{1}{3}\right)^{-2} = 1 : \left(\frac{1}{3}\right)^2 = 1 \cdot \left(\frac{3}{1}\right)^2 = \left(\frac{3}{1}\right)^2 = \frac{9}{1} = 9.$$

$$5) \left(\frac{2}{3}\right)^{-3} = 1 : \left(\frac{2}{3}\right)^3 = 1 \cdot \left(\frac{3}{2}\right)^3 = \left(\frac{3}{2}\right)^3 = \frac{27}{8} = 3\frac{3}{8}.$$

$$6) \left(\frac{1}{7}\right)^{-2} = 1 : \left(\frac{1}{7}\right)^2 = 1 \cdot \left(\frac{7}{1}\right)^2 = \left(\frac{7}{1}\right)^2 = \frac{49}{1} = 49.$$



$$\begin{array}{r} 1\ 2\ 5\ 00 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105\ 000 \end{array}$$



$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

$$\sin 90^\circ = 1$$

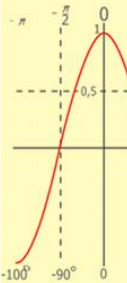
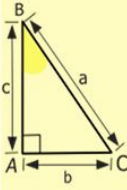
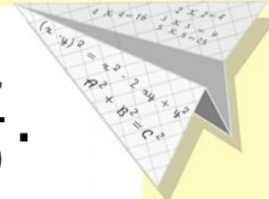


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 + 45 \end{cases}$$

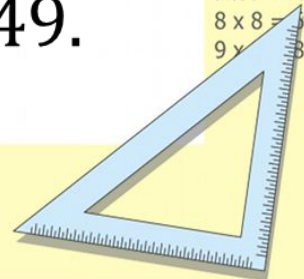
$$x = 70$$

$$(x+y)(x-y) = x^2 - y^2$$



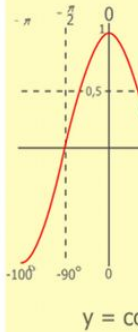
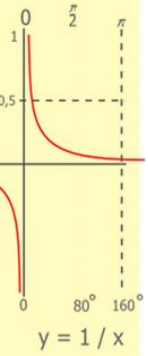
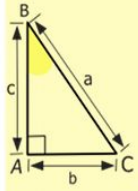
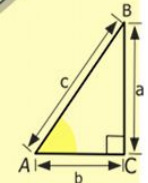
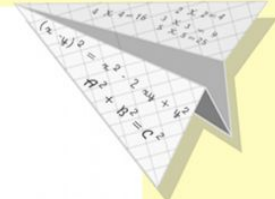
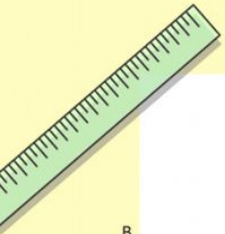
$$y = \cos$$

- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
- 5 x 5 = 25
- 6 x 6 = 36
- 7 x 7 = 49
- 8 x 8 = 64
- 9 x 9 = 81



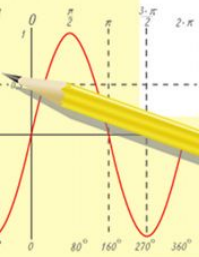
# Вывод:

$$\begin{pmatrix} a \\ b \end{pmatrix}^{-n} = \begin{pmatrix} b \\ a \end{pmatrix}^n$$



$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 2100 \\ + 8400 \\ \hline 105000 \end{array}$$

- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
- 5 x 5 = 25
- 6 x 6 = 36
- 7 x 7 = 49
- 8 x 8 = 64
- 9 x 9 = 81



$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

$$\sin 90^\circ = 1$$

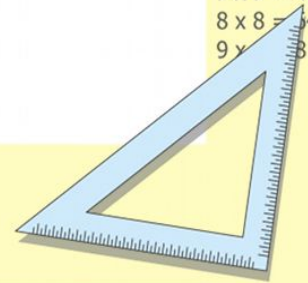


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 + 45 \end{cases}$$

$$x = 70$$

$$(x+y)(x-y) = x^2 - y^2$$

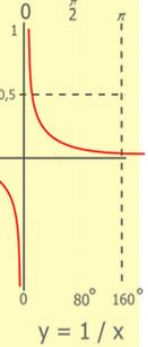
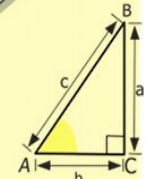
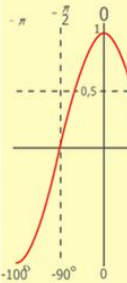
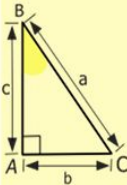
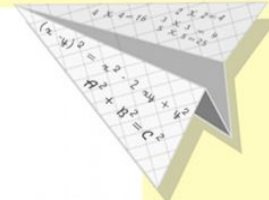
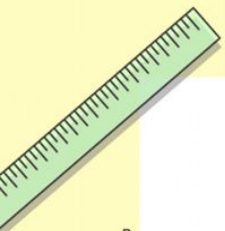


Если ты думаешь на год вперёд –  
посади семя.

Если ты думаешь на десятилетия  
вперёд – посади дерево.

Если ты думаешь на век вперёд –  
воспитай человека.

## Восточная мудрость



$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$

- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
- 5 x 5 = 25
- 6 x 6 = 36
- 7 x 7 = 49
- 8 x 8 = 64
- 9 x 9 = 81



$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

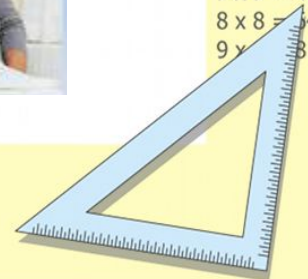
$$\sin 90^\circ = 1$$



$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

$$(x+y)(x-y) = x^2 - y^2$$



# Работаем самостоятельно

Вычислите значение выражения и узнайте, какие витамины наиболее необходимы в ежедневном рационе:

<u>1)</u> $\left(\frac{3}{5}\right)^{-2} = 2\frac{7}{9}$	<u>2)</u> $\left(\frac{1}{5}\right)^{-1}$	<u>3)</u> $\left(\frac{2}{3}\right)^{-3}$	<u>4)</u> $\left(\frac{1}{6}\right)^{-2}$		
<b>A</b>	<b>B</b>	<b>E</b>	<b>D</b>	<b>C</b>	<b>P</b>
36	6 $2\frac{7}{9}$	$\frac{8}{27}$	$3\frac{3}{8}$	5	$\frac{1}{5}$

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

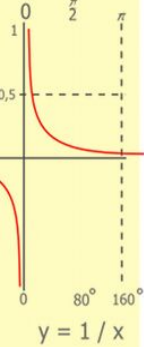
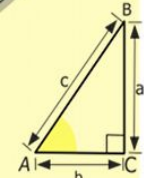
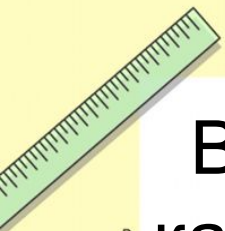
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

$$\sin 90^\circ = 1$$

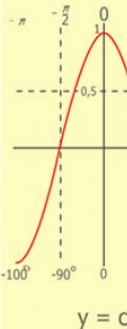
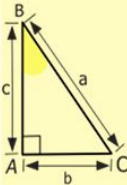
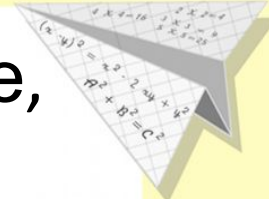
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 + 45 \\ x = 70 \end{cases}$$

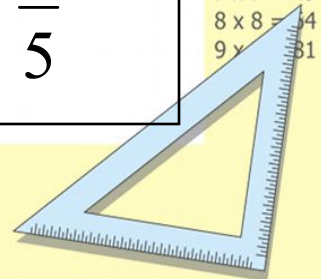
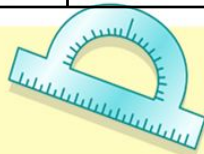
$$(x+y)(x-y) = x^2 - y^2$$



$$\begin{array}{r} 1\ 2\ 5\ 00 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105\ 000 \end{array}$$



$$\begin{array}{l} 2 \times 2 = 4 \\ 3 \times 3 = 9 \\ 4 \times 4 = 16 \\ 5 \times 5 = 25 \\ 6 \times 6 = 36 \\ 7 \times 7 = 49 \\ 8 \times 8 = 64 \\ 9 \times 9 = 81 \end{array}$$



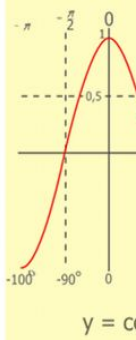
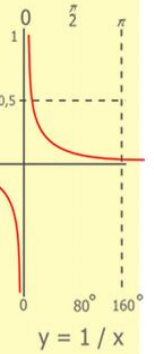
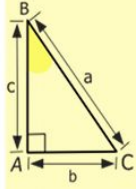
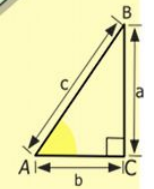
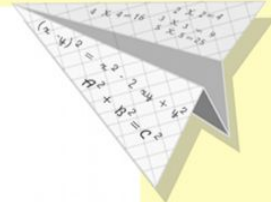
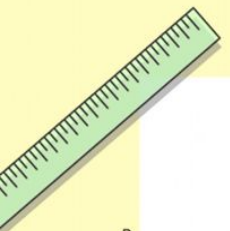


# Витамины



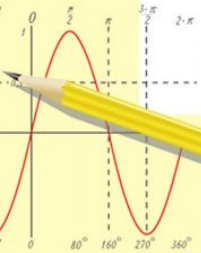
Главная функция  
витамина B6 -  
стимуляция обмена  
веществ.

Витамин содержат: мясо цыплят,  
морская рыба, бобовые, рис, кукуруза,  
орехи, изюм.



$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 2100 \\ + 8400 \\ \hline 105000 \end{array}$$

- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
- 5 x 5 = 25
- 6 x 6 = 36
- 7 x 7 = 49
- 8 x 8 = 64
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$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

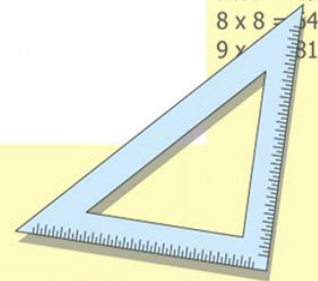
$$\sin 90^\circ = 1$$



$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

$$(x+y)(x-y) = x^2 - y^2$$



# Работаем самостоятельно

Вычислите значение выражения и узнайте, какие витамины наиболее необходимы в ежедневном рационе:

**1)**  $\left(\frac{3}{5}\right)^{-2} = 2\frac{7}{9}$

**2)**  $\left(\frac{1}{5}\right)^{-1} = 5$

**3)**  $\left(\frac{2}{3}\right)^{-3}$

**4)**  $\left(\frac{1}{6}\right)^{-2}$

A

B

E

D

C

P

36

6  
 $2\frac{7}{9}$

$\frac{8}{27}$

$3\frac{3}{8}$

5

$\frac{1}{5}$

$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

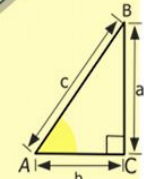
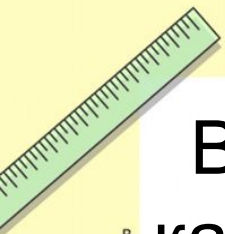
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

$$\sin 90^\circ = 1$$

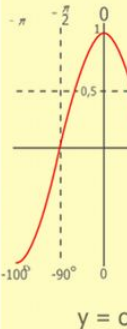
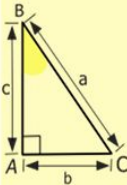
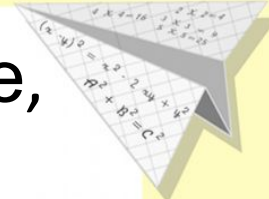
$$\begin{cases} x = 25y + 45 \\ y = 1 \end{cases}$$

$$\begin{cases} x = 25 + 45 \\ x = 70 \end{cases}$$

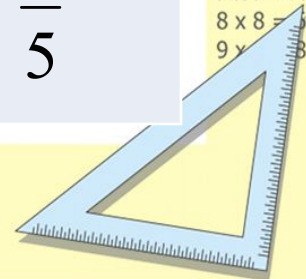
$$(x+y)(x-y) = x^2 - y^2$$



$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$



$$\begin{array}{l} 2 \times 2 = 4 \\ 3 \times 3 = 9 \\ 4 \times 4 = 16 \\ 5 \times 5 = 25 \\ 6 \times 6 = 36 \\ 7 \times 7 = 49 \\ 8 \times 8 = 64 \\ 9 \times 9 = 81 \end{array}$$

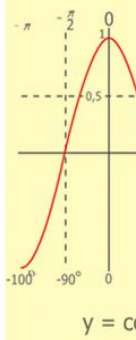
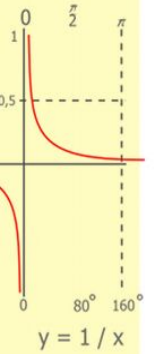
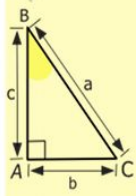
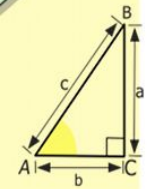
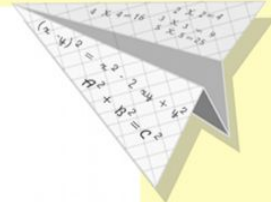
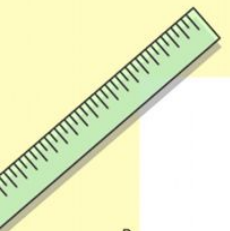


# Витамины



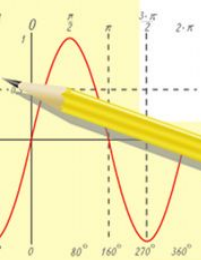
Витамин С отвечает за иммунитет, целостность стенок сосудов.

Его главный источник – это растения: сушеный шиповник, красный перец, чёрная смородина, облепиха, апельсин, лимон.



$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 2100 \\ + 8400 \\ \hline 105000 \end{array}$$

- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
- 5 x 5 = 25
- 6 x 6 = 36
- 7 x 7 = 49
- 8 x 8 = 64
- 9 x 9 = 81



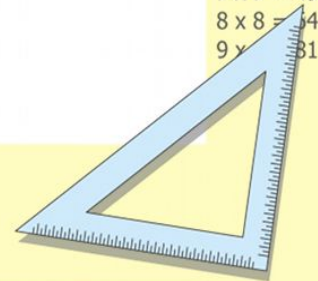
$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

$$\sin 90^\circ = 1$$



$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

$$(x+y)(x-y) = x^2 - y^2$$



# Работаем самостоятельно

Вычислите значение выражения и узнайте, какие витамины наиболее необходимы в ежедневном рационе:

**1)**  $\left(\frac{3}{5}\right)^{-2} = 2\frac{7}{9}$

**2)**  $\left(\frac{1}{5}\right)^{-1} = 5$

**3)**  $\left(\frac{2}{3}\right)^{-3} = 3\frac{3}{8}$

**4)**  $\left(\frac{1}{6}\right)^{-2}$

A

B

E

D

C

P

36

6  
 $2\frac{7}{9}$

$\frac{8}{27}$

$3\frac{3}{8}$

5

$\frac{1}{5}$

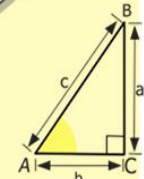
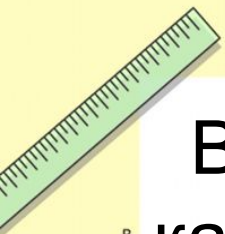
$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

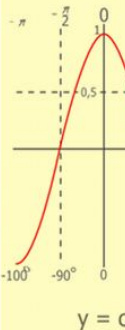
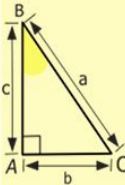
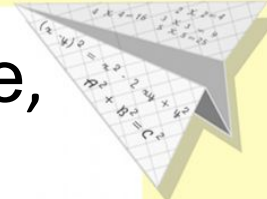
$$\sin 90^\circ = 1$$

$$\begin{cases} x = 25y + 45 \\ y = 1 \\ x = 25 + 45 \\ x = 70 \end{cases}$$

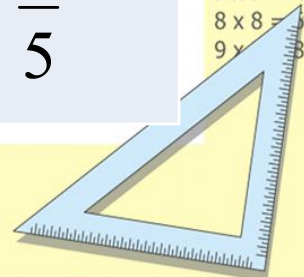
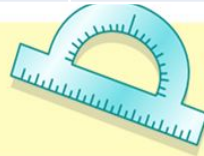
$$(x+y)(x-y) = x^2 - y^2$$



$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$



$$\begin{array}{l} 2 \times 2 = 4 \\ 3 \times 3 = 9 \\ 4 \times 4 = 16 \\ 5 \times 5 = 25 \\ 6 \times 6 = 36 \\ 7 \times 7 = 49 \\ 8 \times 8 = 64 \\ 9 \times 9 = 81 \end{array}$$

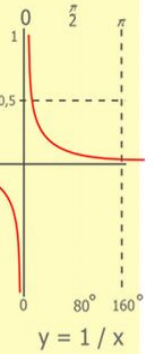
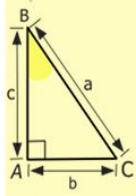
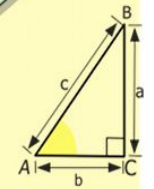
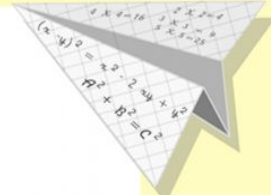
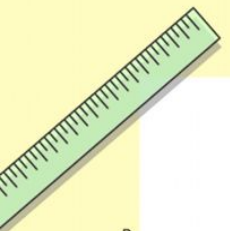


# Витамины



Дефицит витамина D ведёт к снижению крепости костной ткани.

Лучшими природными источниками являются рыбий жир и морская рыба: сардина, сельдь, лосось, скумбрия. А также яичный желток, сливочное масло.



$$\begin{array}{r} 1 \\ \times 2500 \\ \hline 2500 \\ + 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$

- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
- 5 x 5 = 25
- 6 x 6 = 36
- 7 x 7 = 49
- 8 x 8 = 64
- 9 x 9 = 81



$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

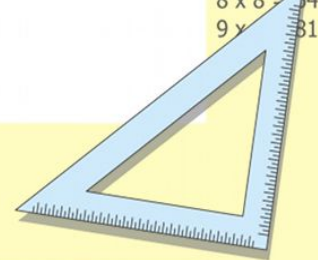
$$\sin 90^\circ = 1$$



$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

$$\begin{cases} y = 1 \\ x = 25 + 45 \end{cases}$$
$$\frac{x}{70}$$

$$(x+y)(x-y) = x^2 - y^2$$



# Работаем самостоятельно

Вычислите значение выражения и узнайте, какие витамины наиболее необходимы в ежедневном рационе:

**1)**  $\left(\frac{3}{5}\right)^{-2} = 2\frac{7}{9}$

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**4)**  $\left(\frac{1}{6}\right)^{-2} = 36$

A

B

E

D

C

P

36

6  
2 $\frac{7}{9}$

$\frac{8}{27}$

3 $\frac{3}{8}$

5

$\frac{1}{5}$

$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

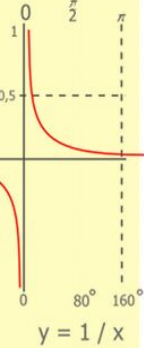
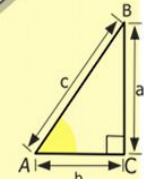
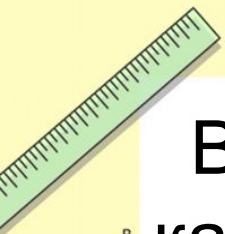
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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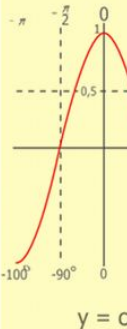
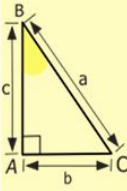
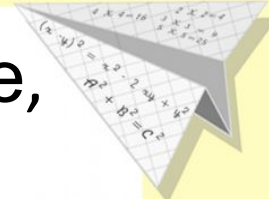
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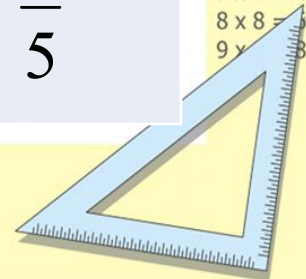
$$(x+y)(x-y) = x^2 - y^2$$



$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$



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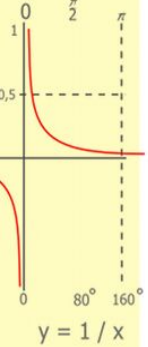
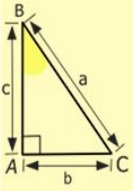
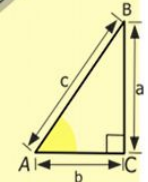
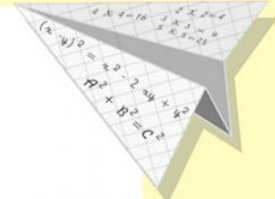
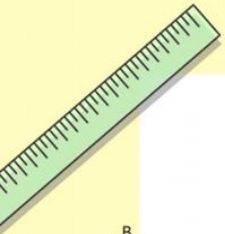


# Витамины



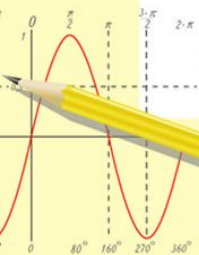
Витамин А необходим для нормального роста и состояния иммунитета.

Содержится в рыбьем жире, сыре, печени, в моркови, тыкве, зелёном луке.



$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$

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$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

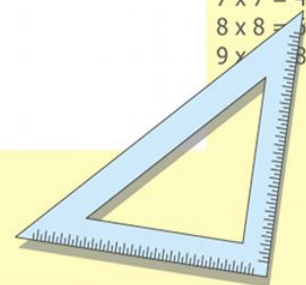
$$\sin 90^\circ = 1$$



$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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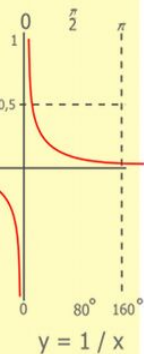
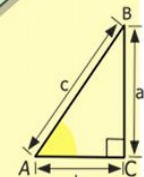
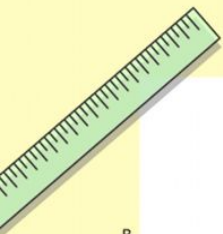
$$(x+y)(x-y) = x^2 - y^2$$



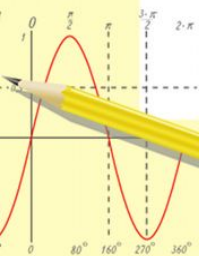
# Работаем вместе

Вычислить значение  
выражения:

$$\left(\frac{3}{4}\right)^{-1} - (0,5)^0 + 3^{-2} =$$



$$\begin{array}{r} \frac{1}{2} 500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$



$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

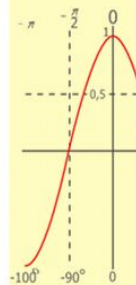
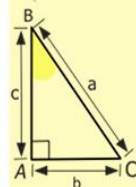
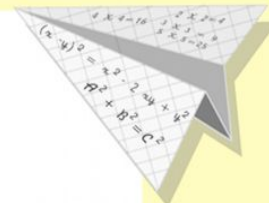
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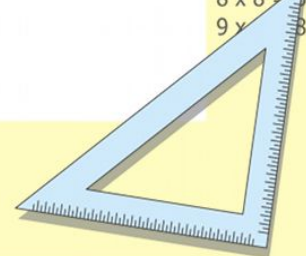
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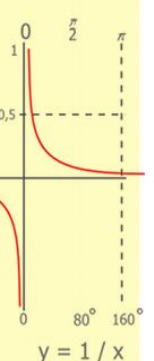
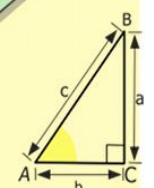
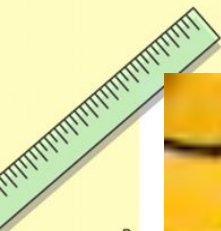


Спасибо за урок,  
дети!

Вышли фото  
классной работы

мне на почту:

[konshiny2011@mail.ru](mailto:konshiny2011@mail.ru)



$$\begin{array}{r} 1 \\ \times 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$



$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

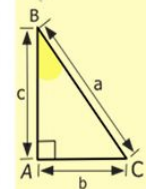
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$$(x+y)(x-y) = x^2 - y^2$$



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