

# Математик

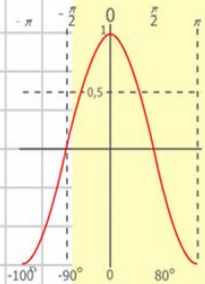
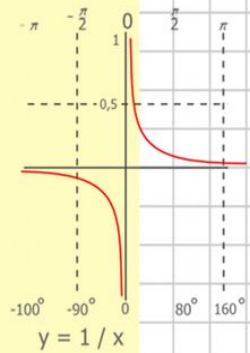
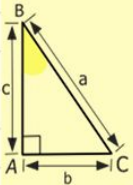
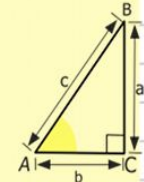
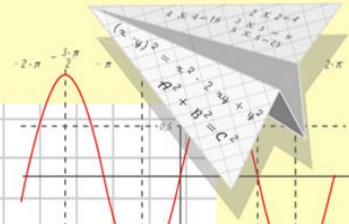
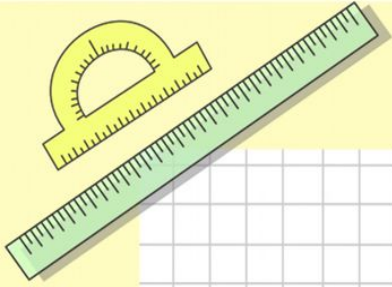
а

## МАТЕМАТИЧЕСКАЯ ИГРА НА ПОНИМАНИЕ ТЕМЫ «ПЛОЩАДЬ И ПЕРИМЕТР ПРЯМОУГОЛЬНИКА»

Выполнила ученица 4 «а» класса  
Филиппова Виктория

МБОУ «ПСОШ №3-ОЦ с УИОП»

Руководитель: Сыромятникова М.  
А.



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

$$y = \cos x$$

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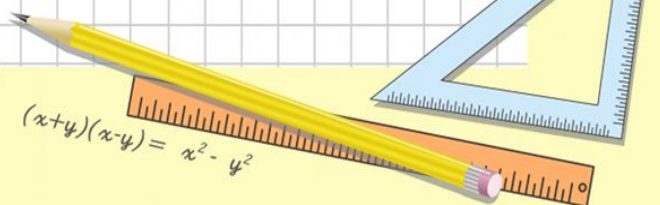
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$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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



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



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

# Математическая игра по теме «Площадь и периметр прямоугольника»

Актуальность

Цель

Задачи

Объект

Гипотеза

Результат

Практика

Игра

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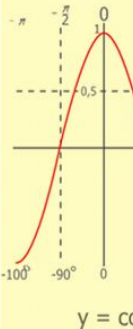
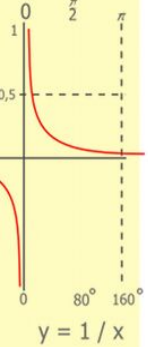
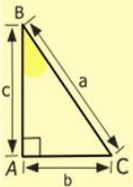
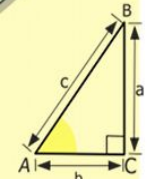
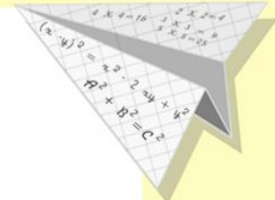
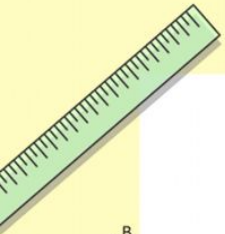
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$$(x+y)(x-y) = x^2 - y^2$$

# Актуальность проекта

Согласно статистике по данным ВПР четвероклассники испытывают трудности при решении задач с вычислением площади и периметра прямоугольника (квадрата).



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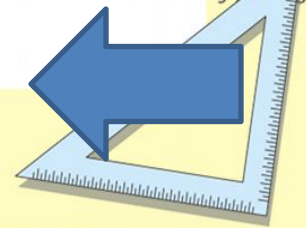
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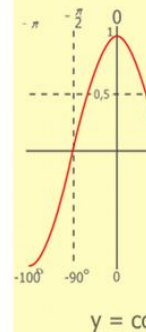
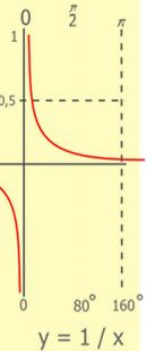
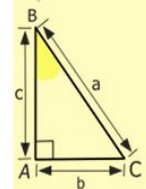
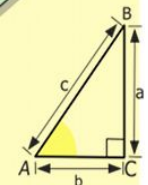
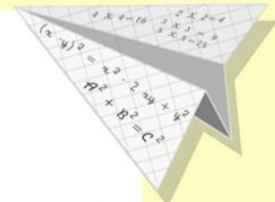
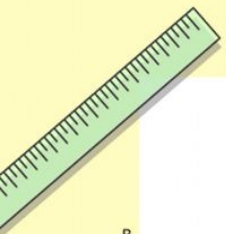
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$$(x+y)(x-y) = x^2 - y^2$$



# Объект исследования - нахождение площади и периметра прямоугольника



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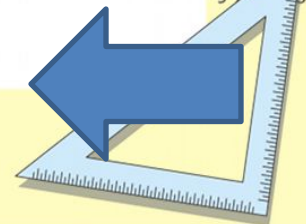
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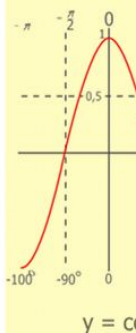
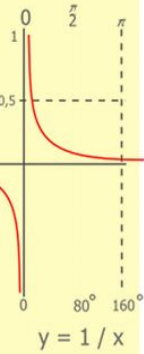
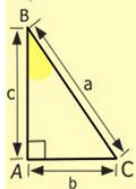
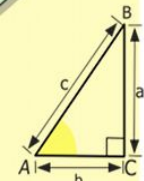
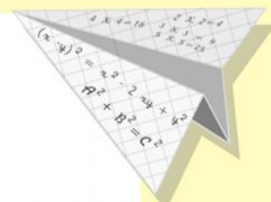
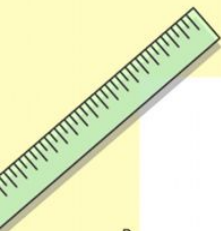
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# Цель:

Закрепить тему на нахождение площади и периметра прямоугольника



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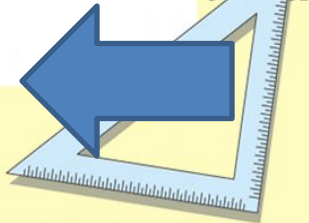
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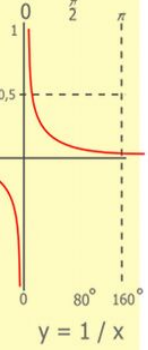
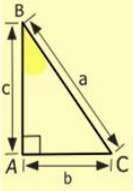
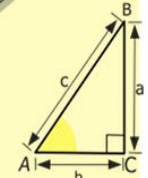
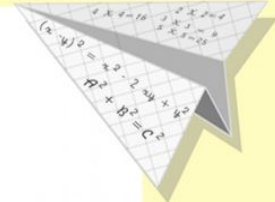
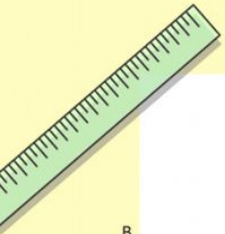
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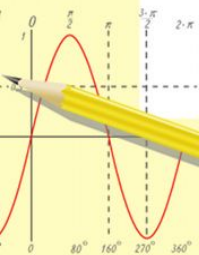
# Задачи:

1. Подбор задач
2. Провести тестирование
3. Провести в классе игру
4. Провести контрольный тест



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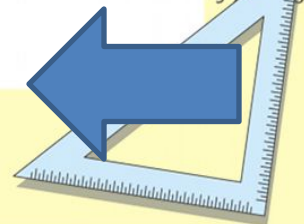
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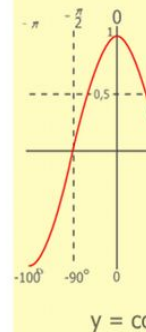
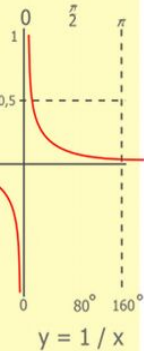
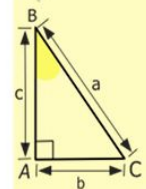
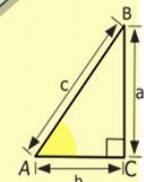
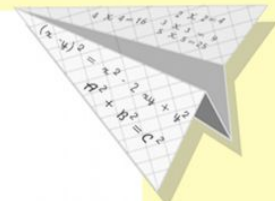
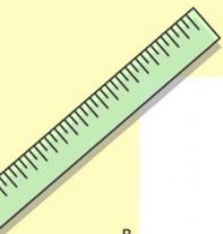
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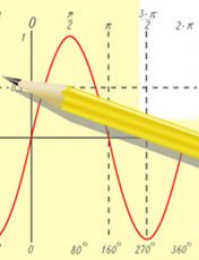
## Гипотеза:

Если учащиеся усвоят тему на нахождения площади и периметра прямоугольника, то не испытают проблем при решении данного задания в ВПР



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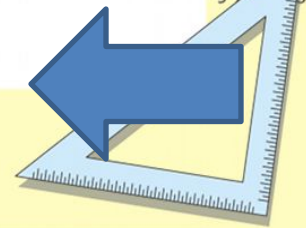
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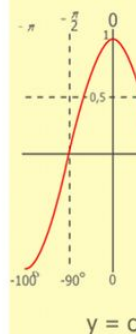
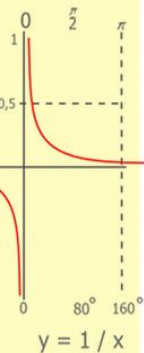
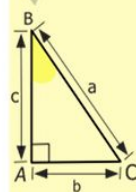
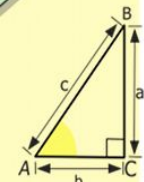
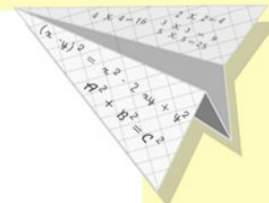
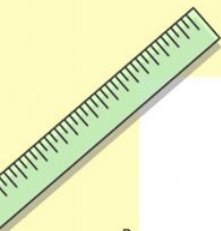
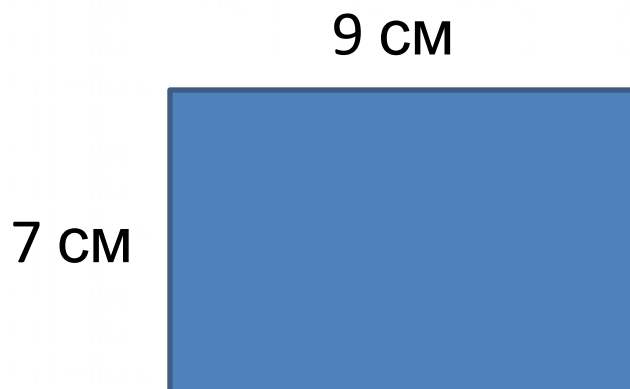
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# Тестирование

Состоит из 2 задач:

Найти периметр и площадь  
прямоугольника.



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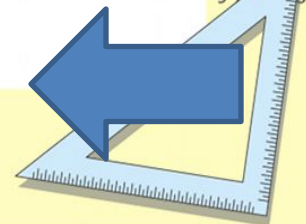
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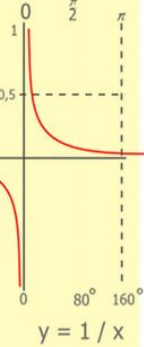
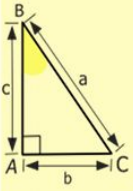
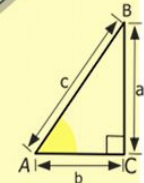
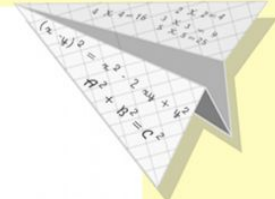
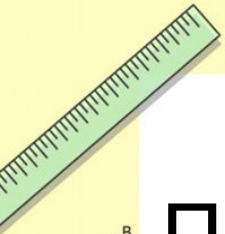
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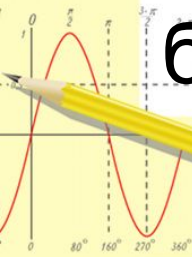
# Игра

Первый игрок подбрасывает 2 раза кубик. 🎲 Используя выпавшие числа, он обозначает получившийся периметр прямоугольника или квадрата. В середине фигуры записывается его площадь или периметр. Игра заканчивается, когда больше не остаётся места для фигур. Выигрывает тот, кто занял больше места на листе бумаги.



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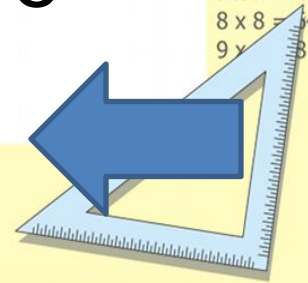


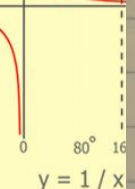
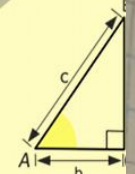
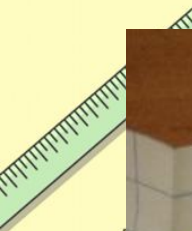
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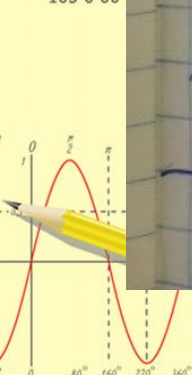
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$$x = 70$$

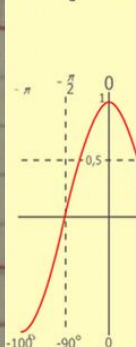
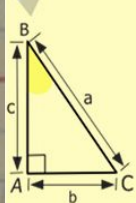




$$\begin{array}{r}
 1 \\
 2500 \\
 \times 42 \\
 \hline
 210 \\
 + 84 \\
 \hline
 10500
 \end{array}$$



6	9	15	6	9	4	8	4	4
9	15	8	5	7	6	2	1	6
4	3	6	2	18	9	2	1	2
4	2	8	7	18	2	6	6	2
4	1	16	5	8	1	6	1	2
12	12	12	12	12	6	4	2	4
12	30	12	48	12	6	4	12	24
12	6	6	10	16	4	20	1	24



$$y = \cos$$

- 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



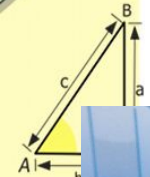
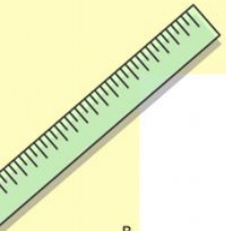
$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

sin 90

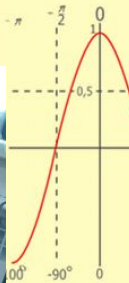
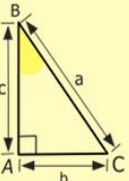


$$\begin{array}{l}
 y = 1 \\
 x = 25 + 45 \\
 \hline
 x = 70
 \end{array}$$

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

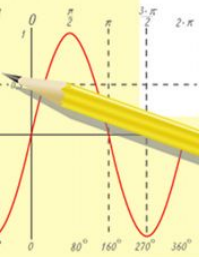


$$\begin{array}{r} 1 \\ \times 4 \\ \hline 21 \\ + 84 \\ \hline 105 \end{array}$$



$$y = \cos$$

- 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



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

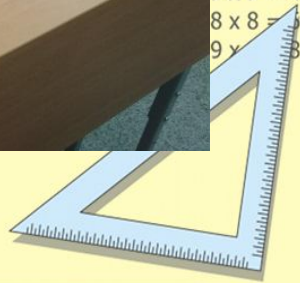
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

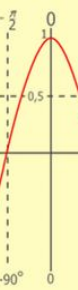
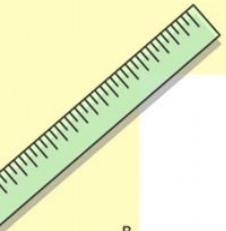
$$\sin 90^\circ = 1$$



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

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





$y = \cos$

- 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



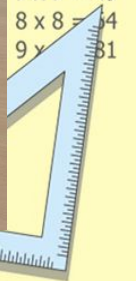
$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

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

$\sin 90^\circ$

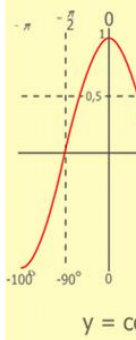
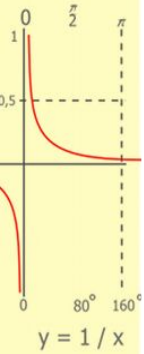
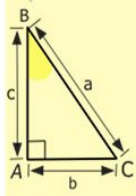
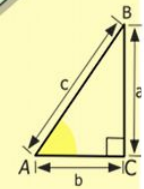
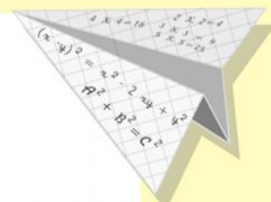
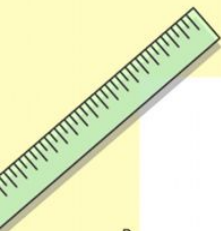
$x = 70$

$x^2 - y^2$



# Результат

	Тест 1	Тест 2
Справилис ь	14	17
Не справилис ь	7	4
<b>ВСЕГО</b>	<b>21</b>	<b>21</b>



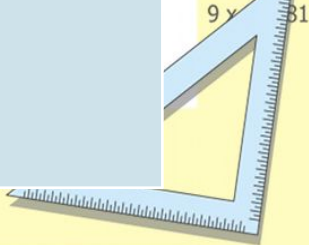
$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$

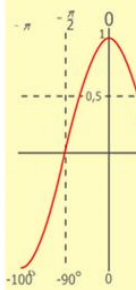
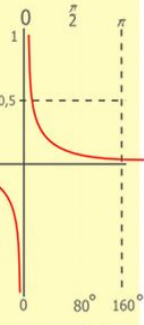
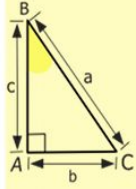
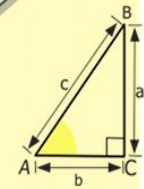
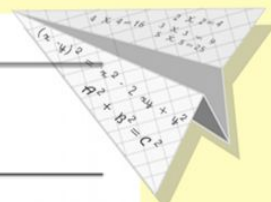
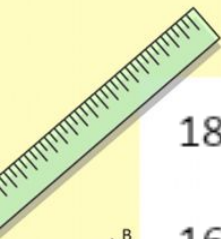
- $2 \times 2 = 4$
- $3 \times 3 = 9$
- $4 \times 4 = 16$
- $5 \times 5 = 25$
- $6 \times 6 = 36$
- $7 \times 7 = 49$
- $8 \times 8 = 64$
- $9 \times 9 = 81$



$$\frac{x=20+40}{x=70}$$

$$x^2 - y^2$$



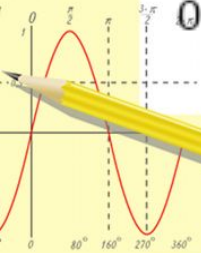


$$y = 1/x$$

$$y = \cos$$

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

- 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



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

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

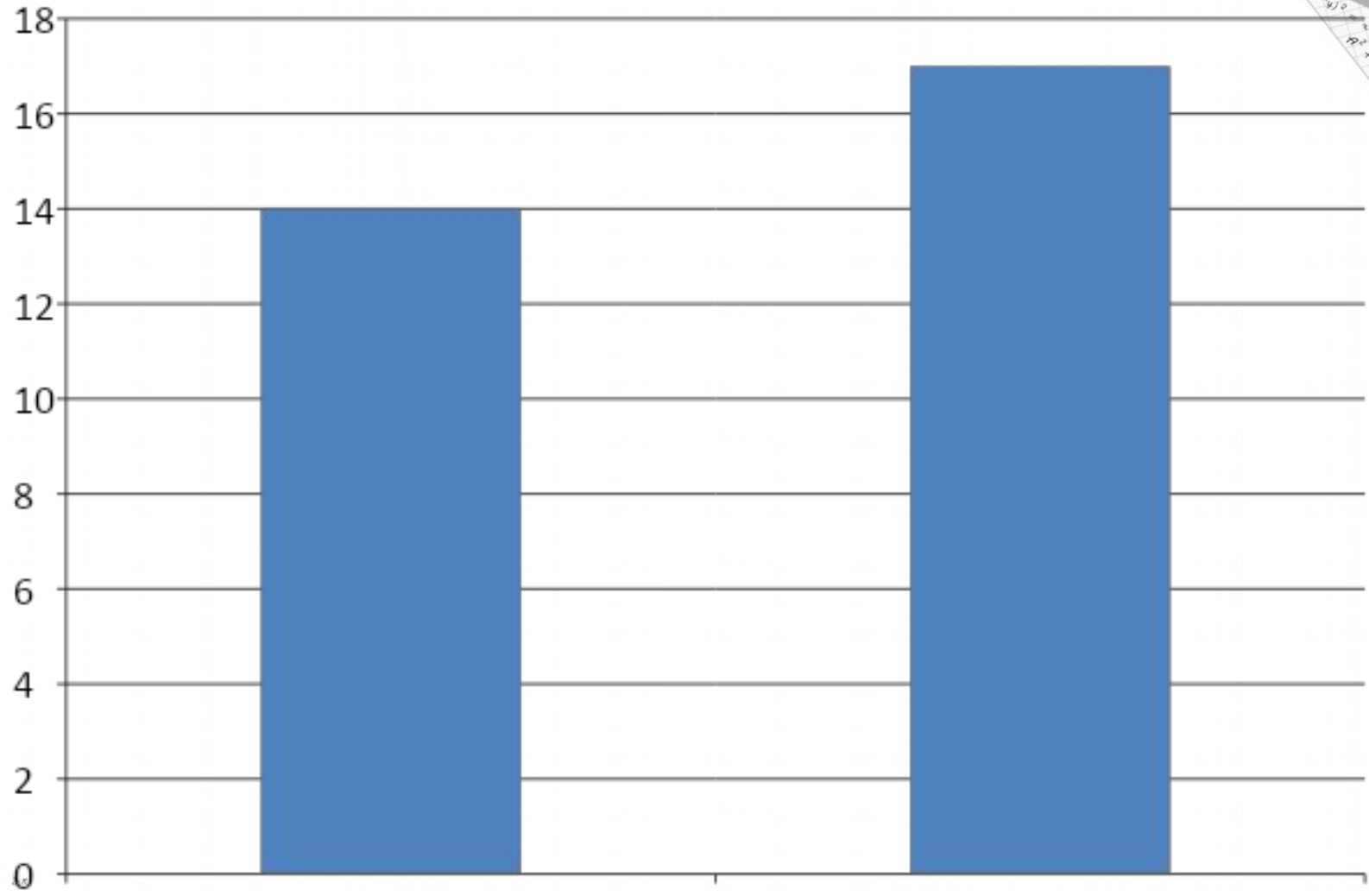
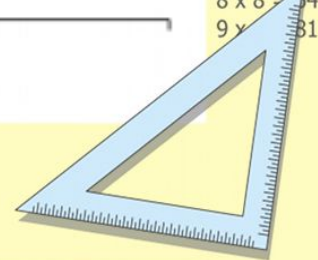
$$\sin 90^\circ = 1$$



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

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

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

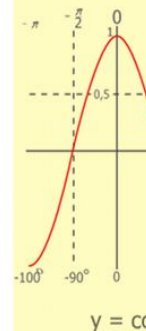
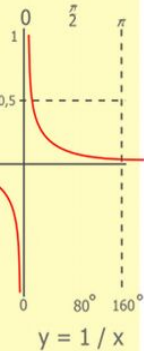
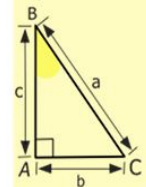
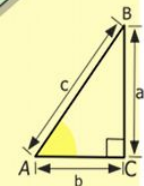
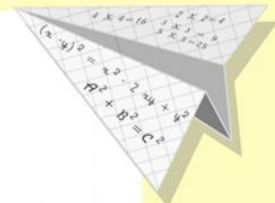
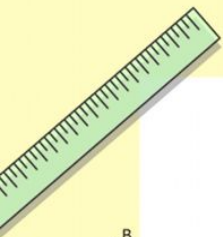


Tect 1

Tect 2

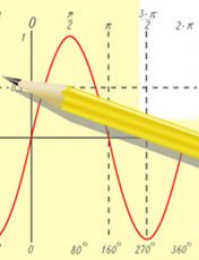
# Вывод

В итоге нашего исследования подтвердилось, что данная игра способствует усвоению темы нахождение площади и периметра прямоугольника (квадрата).



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

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



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

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

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



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

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

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

