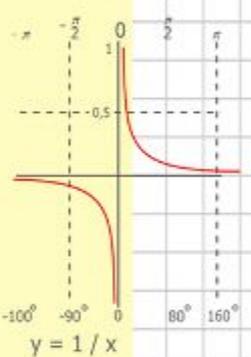
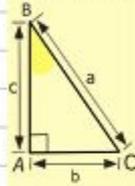
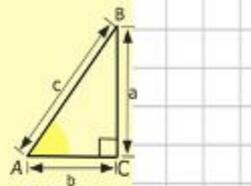
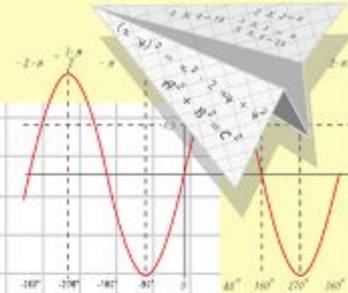
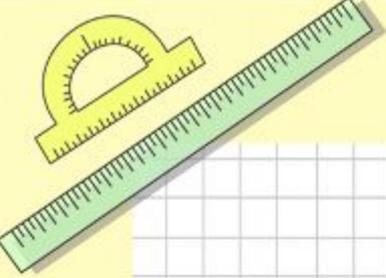


Урок по наглядной геометрии 3 класс

Учитель МБОУ «СОШ № 32»
Энгельсского района
Саратовской области
Витулева С.В.



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

- 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

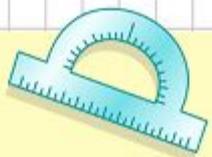


$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

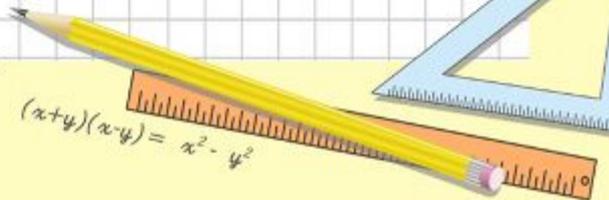
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$



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



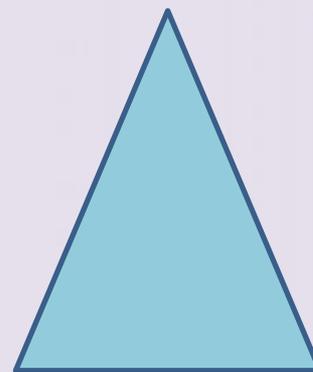
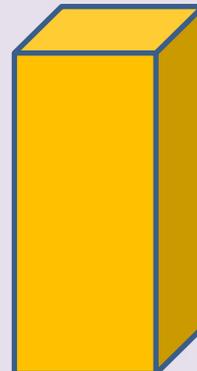
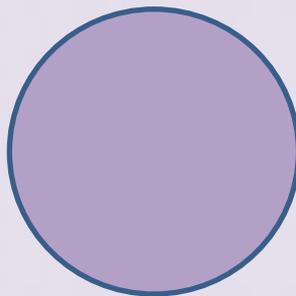
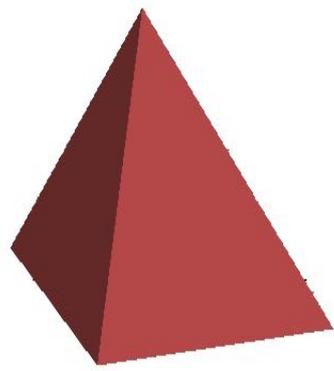
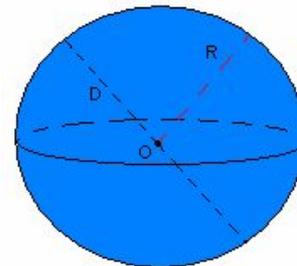
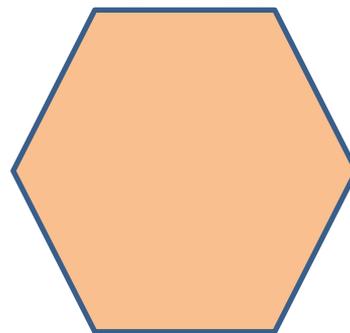
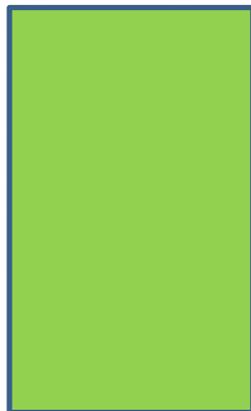
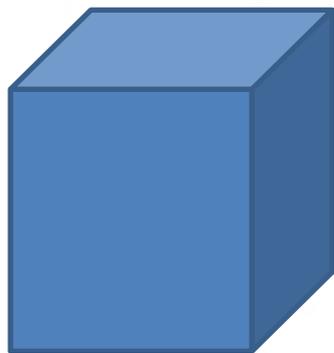
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$
$$\begin{cases} y = 1 \\ x = 25 + 45 \end{cases}$$
$$x = 70$$



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

Разминка

Разделите на группы



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

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

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

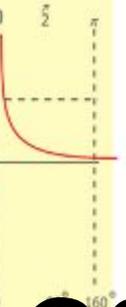
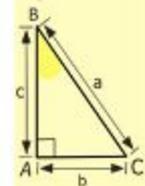
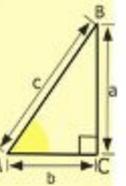
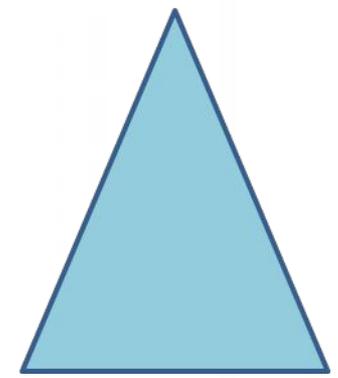
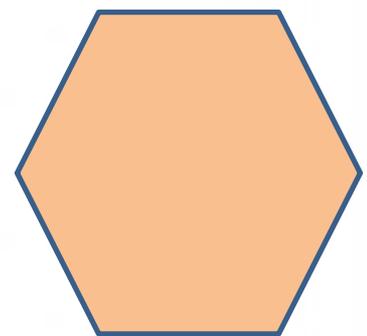
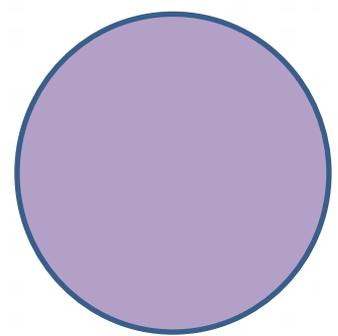
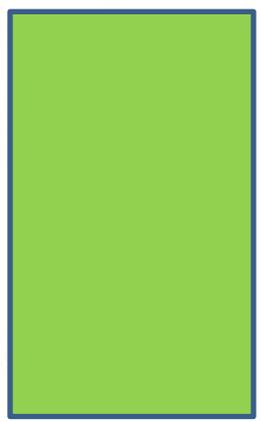
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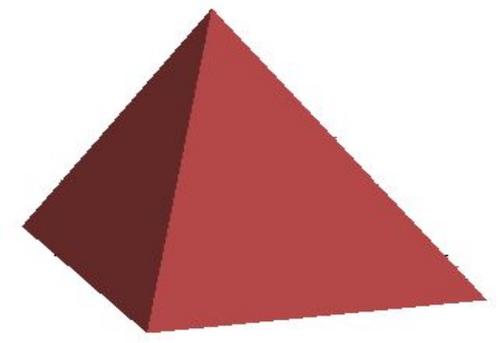
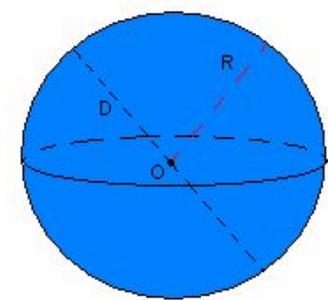
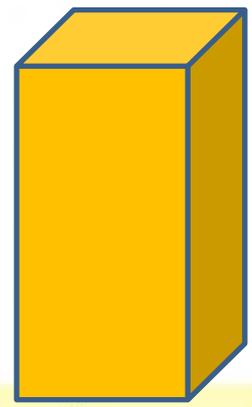
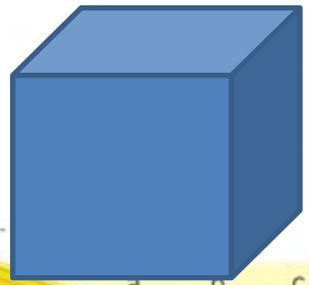
$$(x+y)(x-y) = x^2 - y^2$$

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Плоские геометрические фигуры



Объёмные геометрические тела



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

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

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

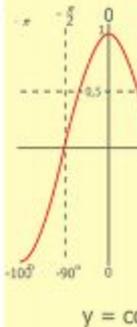
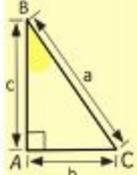
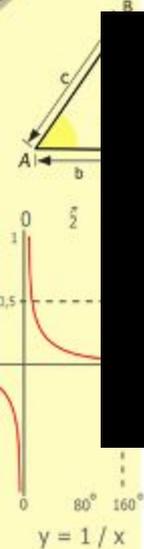
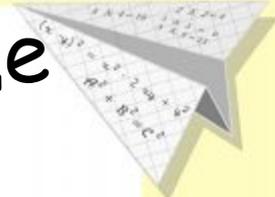
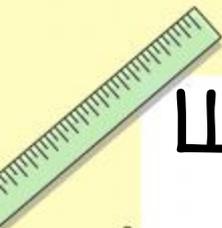
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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

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

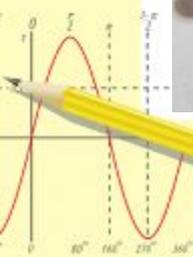
$$(x+y)(x-y) = x^2 - y^2$$

Шар и сфера в окружающей природе



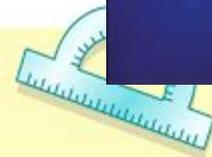
$$\begin{array}{r} \frac{1}{2} 500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$

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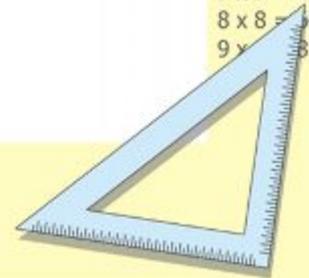


$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

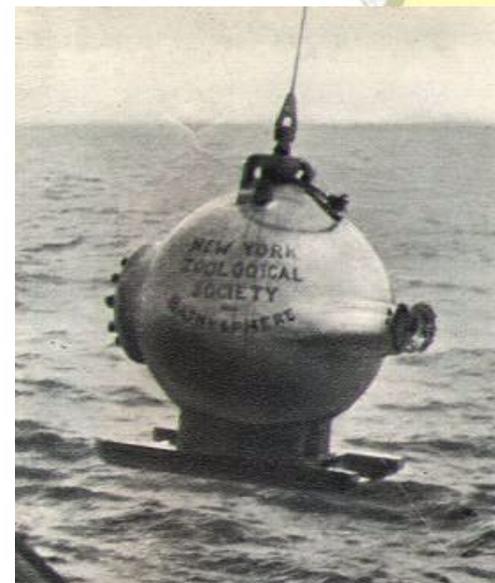
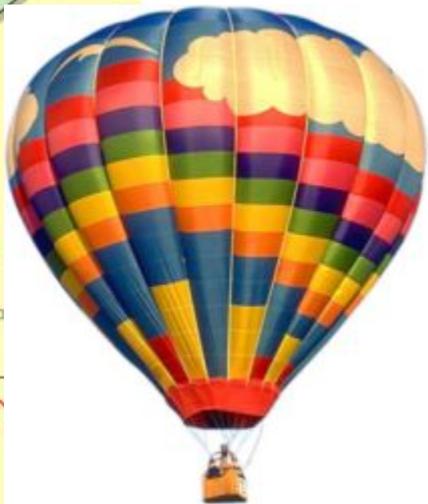
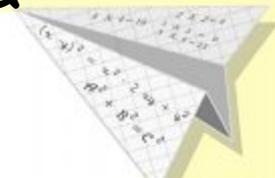
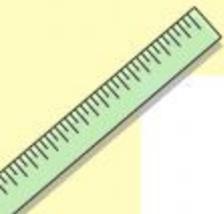
$\sin 90^\circ = 1$



$$\frac{x = 25 + 45}{x = 70}$$
$$(x-y)(x+y) = x^2 - y^2$$



Шар и сфера в жизни человека



$0 \quad 80^\circ \quad 160^\circ$
 $y = 1/x$

$y = \cos$

	1	2	3	4	5
2	5	00			
x	4	2			
+	2	1	0		
+	8	4			
	1	0	5	0	0

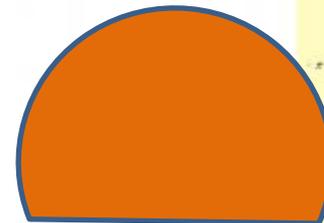
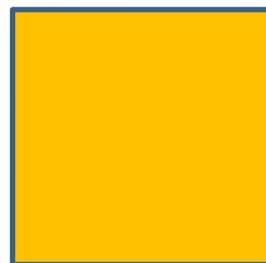
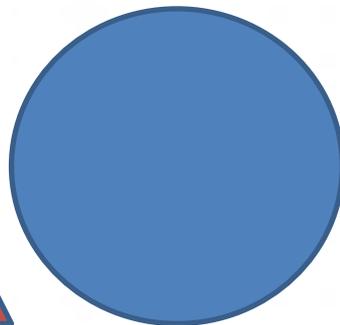
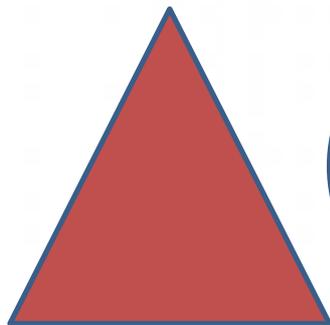
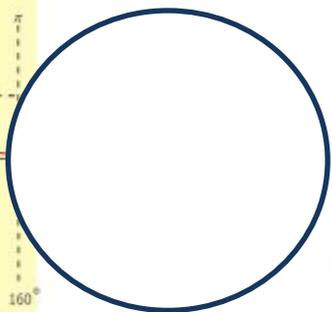


$(x+y)(x-y) = x^2 - y^2$

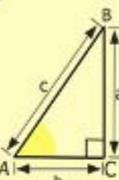
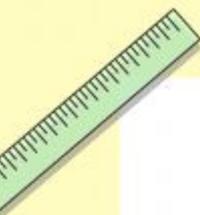
$x = 70$



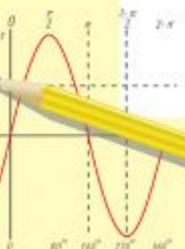
Выбери фигуру, которая является пересечением шара с плоскостью



Выбери фигуру, которая является пересечением сферы с плоскостью



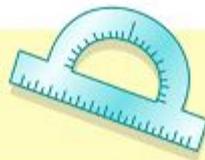
$$\begin{array}{r} \frac{1}{2} 500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$



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

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

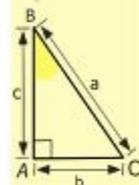
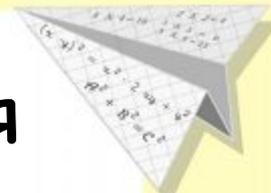


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

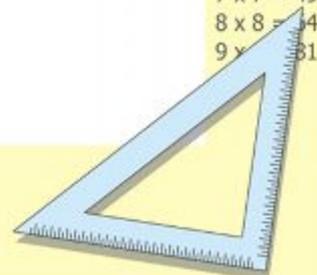
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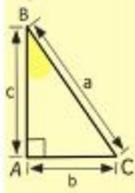
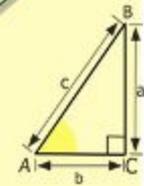
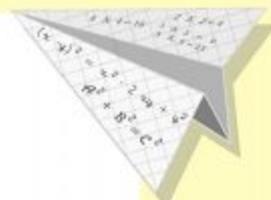
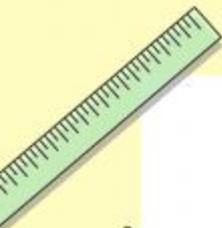


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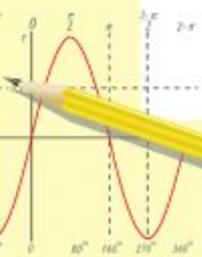
Тема урока:

Взаимное расположение окружности и круга



$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 2100 \\ + 840 \\ \hline 105000 \end{array}$$

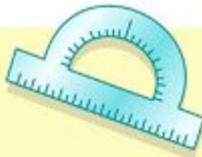
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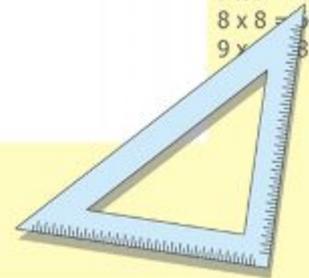
$$\sin 90^\circ = 1$$



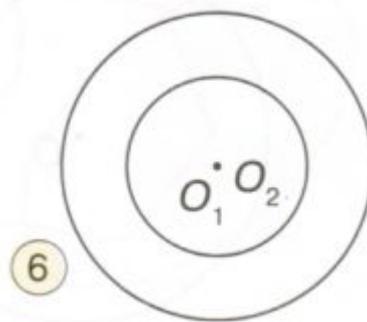
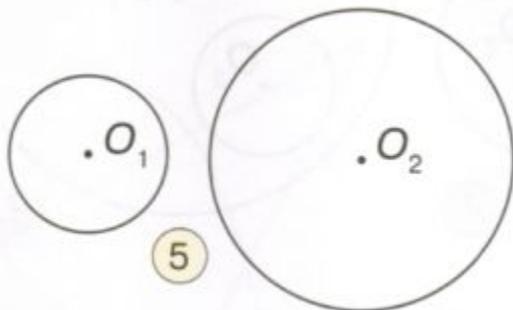
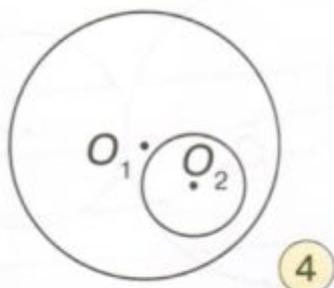
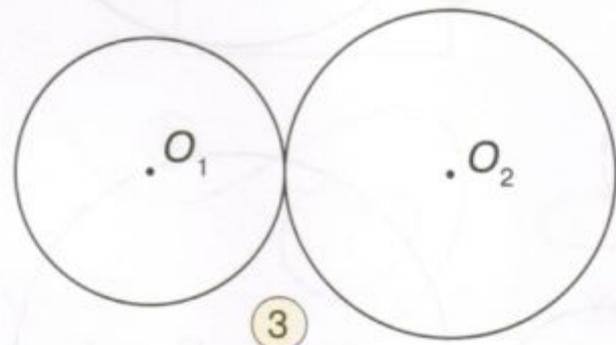
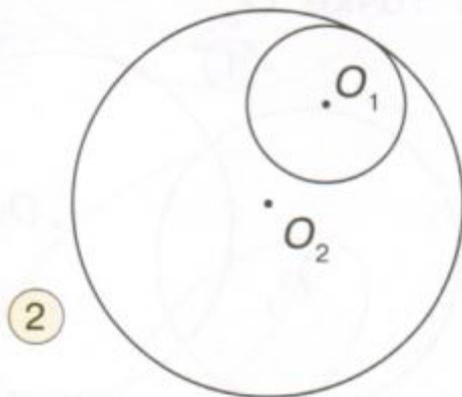
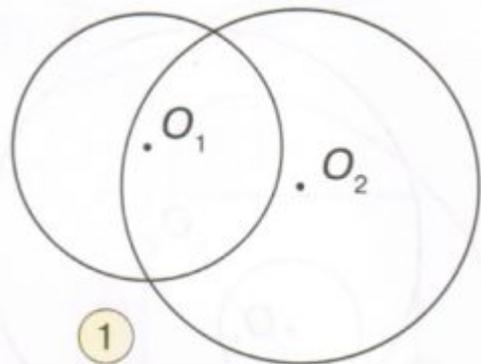
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$$(x+y)(x-y) = x^2 - y^2$$



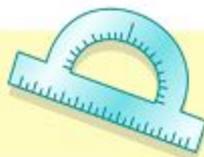
36 а) Выдели красным цветом границу фигуры, которая является пересечением двух кругов с центрами в точках O_1 и O_2 .



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

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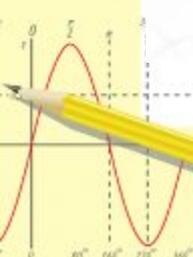
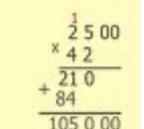
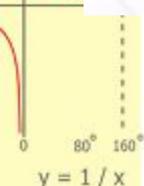
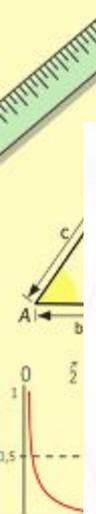
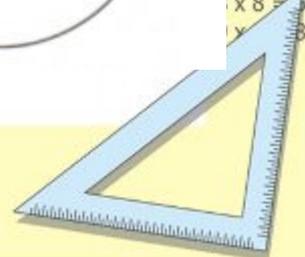
$$\sin 90^\circ = 1$$



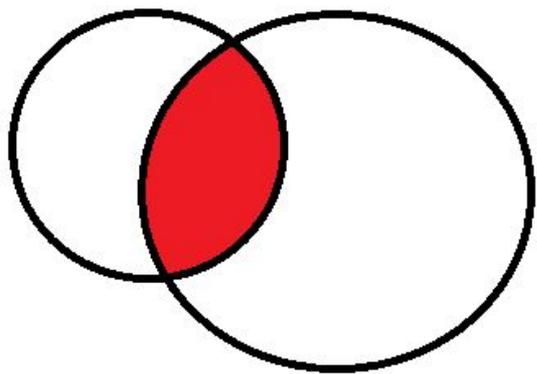
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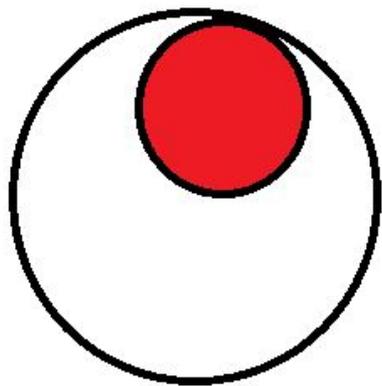
$$(x+y)(x-y) = x^2 - y^2$$



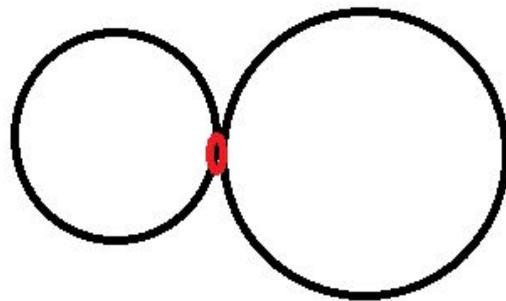
- $x 2 = 4$
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- $x 7 = 49$
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- $x 9 = 81$



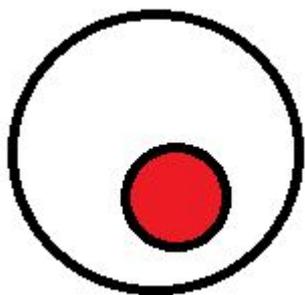
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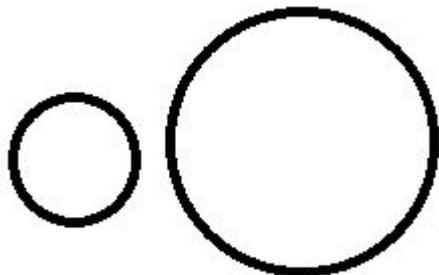
2



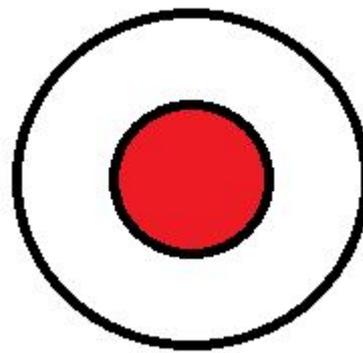
3



4



5



6

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

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

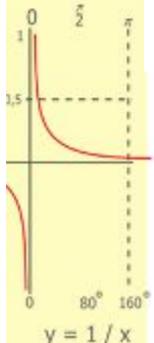
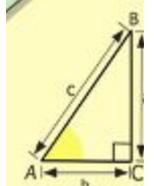
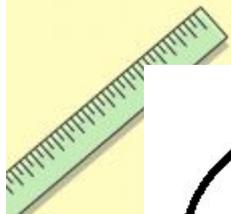
$$\sin 90^\circ = 1$$

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

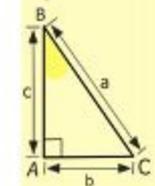
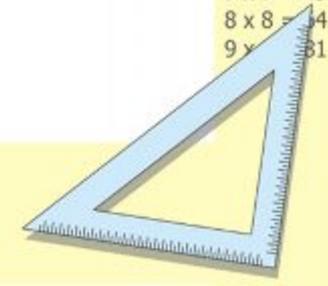
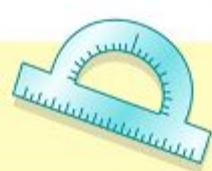
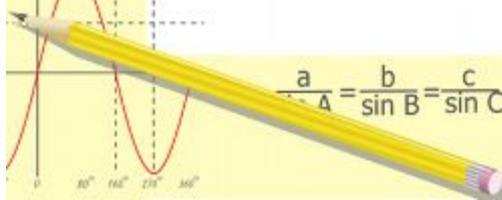
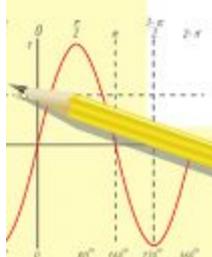
$$\begin{cases} y = 1 \\ x = 25 + 45 \end{cases}$$

$$x = 70$$

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

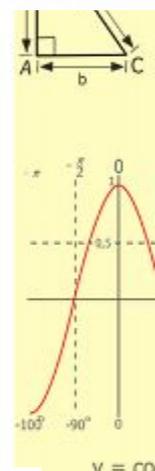
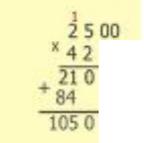
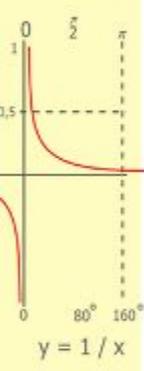
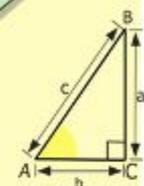
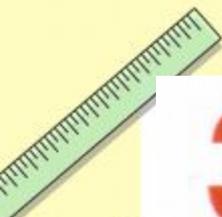


$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$

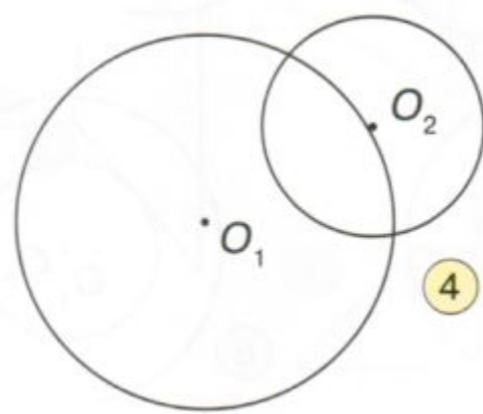
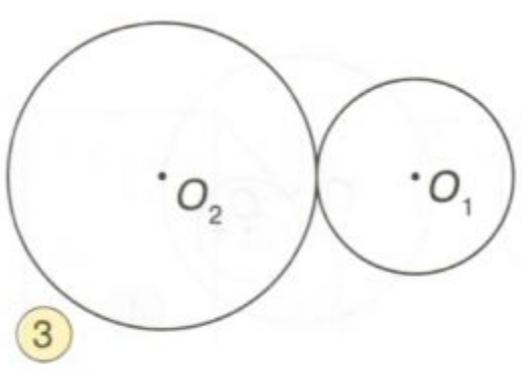
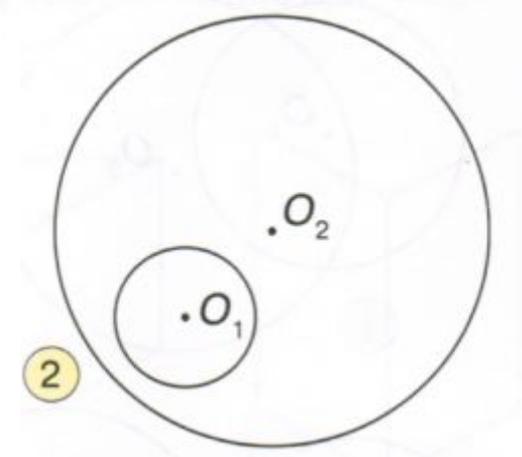
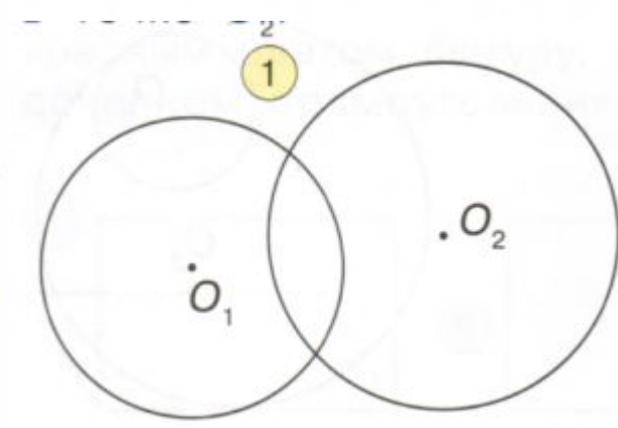


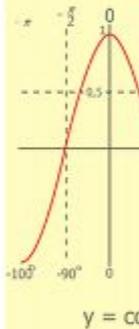
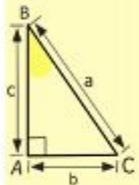
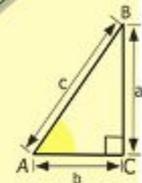
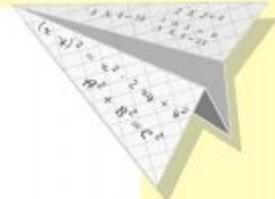
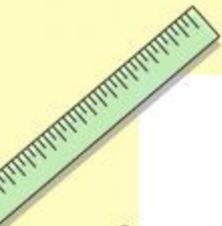
$$\begin{array}{l} 2 \times 2 = 4 \\ 3 \times 3 = 9 \\ 4 \times 4 = 16 \\ 5 \times 5 = 25 \\ 6 \times 6 = 36 \\ 7 \times 7 = 49 \\ 8 \times 8 = 64 \\ 9 \times 9 = 81 \end{array}$$

37 а) Выдели красным цветом фигуру, которая является пересечением круга с центром в точке O_1 и окружности с центром в точке O_2 .



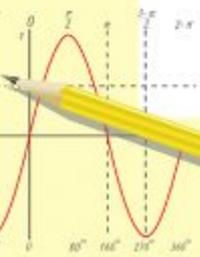
- $\times 2 = 4$
- $\times 3 = 9$
- $\times 4 = 16$
- $\times 5 = 25$
- $\times 6 = 36$
- $\times 7 = 49$
- $\times 8 = 64$
- $\times 9 = 81$





$$\begin{array}{r} \frac{1}{2} 500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 10500 \end{array}$$

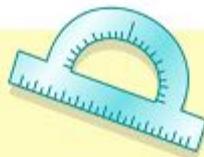
- 2 x 2 = 4
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$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

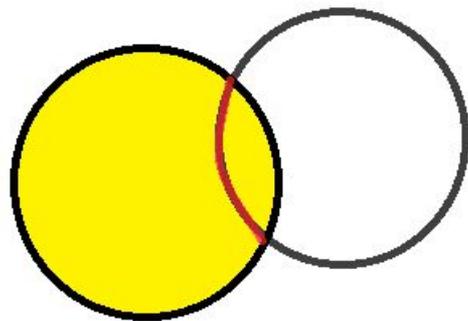
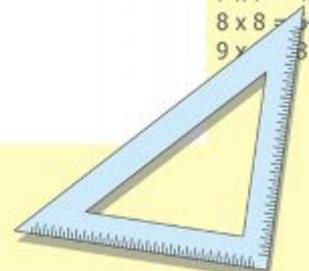
$$\sin 90^\circ = 1$$



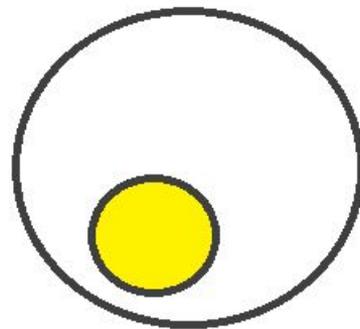
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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

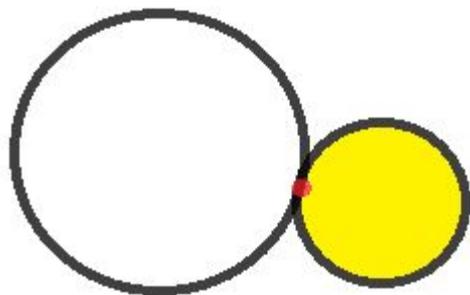
$$(x+y)(x-y) = x^2 - y^2$$



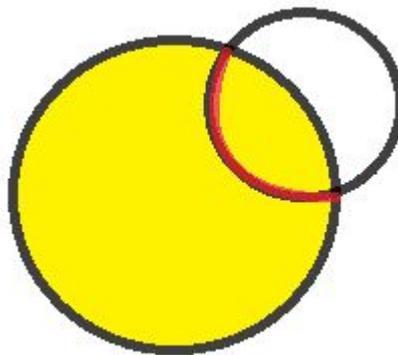
1



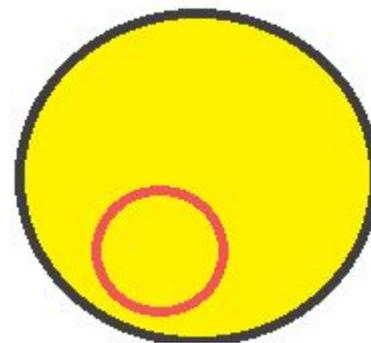
2



3



4



5

Итог

урока:

1. Какую цель ставили?
2. Какие задания выполнялись легко?
3. Какие задания вызвали трудности?
4. Над чем ещё надо поработать?
5. Оцените свою работу.

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

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

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

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

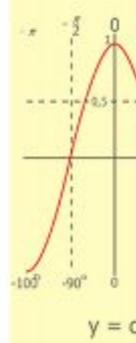
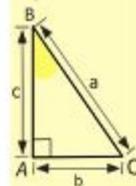
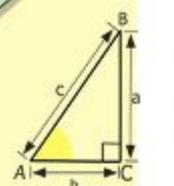
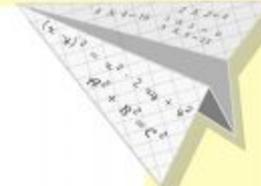
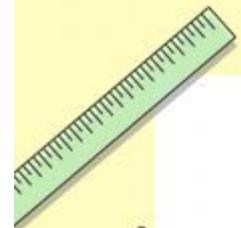
$$\begin{cases} y = 1 \\ x = 25 + 45 \end{cases}$$

$$x = 70$$

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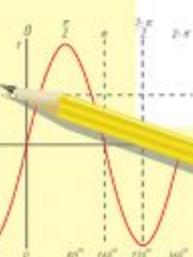
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Спасибо за урок!



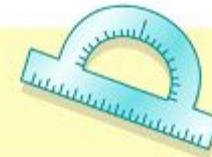
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$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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



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

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

