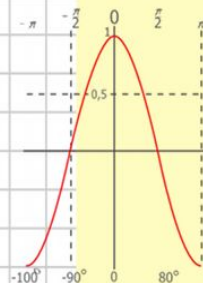
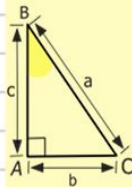
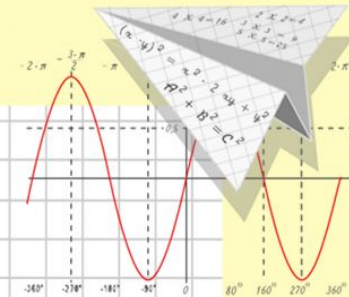
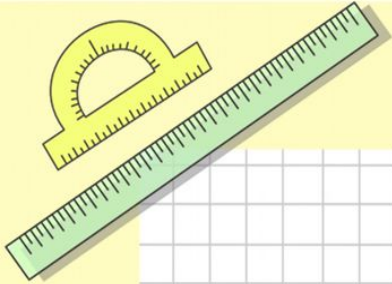


# Математик

а

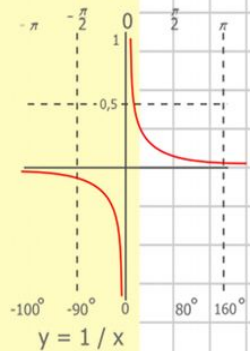
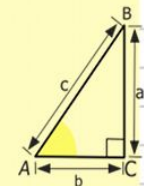
## Тема урока: «Сложение и вычитание смешанных чисел».

### 6 класс



y = cos x

- 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



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



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

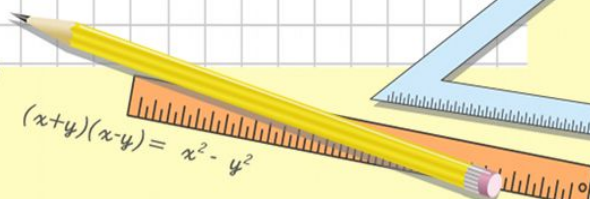
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$



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



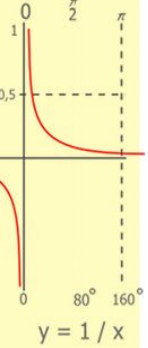
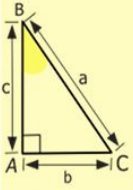
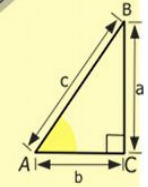
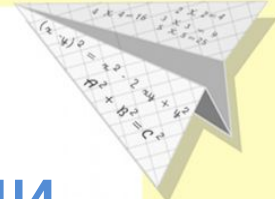
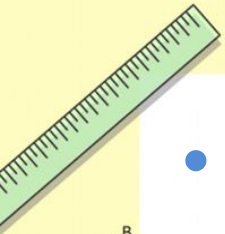
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \\ y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$



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

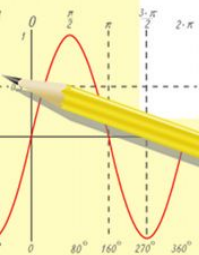
# Цели урока

- повторить правила выполнения действий с обыкновенными дробями и смешанными числами,
- показать, как мы умеем применять эти правила при решении конкретных примеров и задач.



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

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



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

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

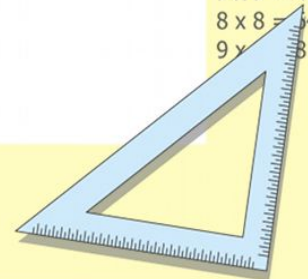
$$\sin 90^\circ = 1$$



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

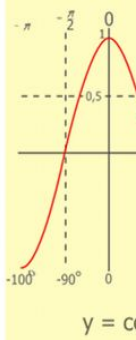
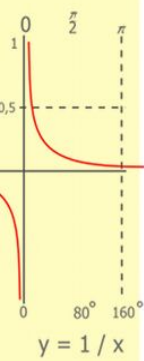
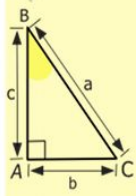
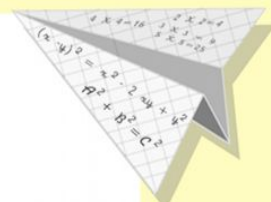
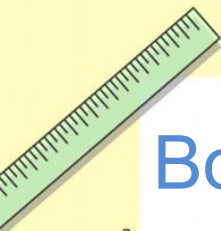
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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



# Вопросы классу:

- Как выполнить сложение двух дробей с разными знаменателями?
- Что нужно сделать, чтобы сложить смешанные числа?
- Что нужно сделать, чтобы выполнить вычитание смешанных чисел?
- Как выполнить вычитание двух дробей с разными знаменателями?



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

- 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



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

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

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



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

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

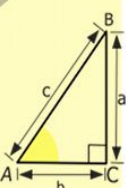
$$(x+y)(x-y) = x^2 - y^2$$



# Проверь себя

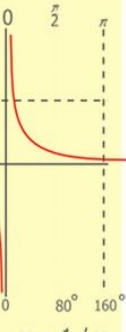
## Вариант 1

## Вариант 2



1.  $8 \frac{3}{5}$

1.  $5 \frac{5}{12}$

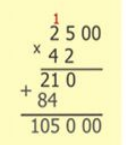


2.  $3 \frac{3}{4}$

2.  $4 \frac{22}{35}$

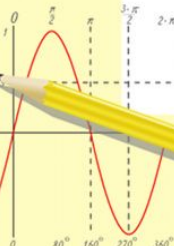
3.  $11 \frac{3}{7}$

3.  $10 \frac{4}{9}$



4.  $6 \frac{1}{5}$

4.  $3 \frac{7}{15}$



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

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

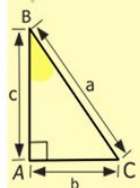
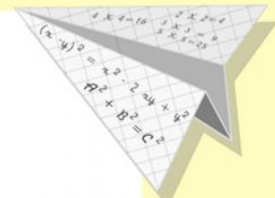
$\sin 90^\circ = 1$



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

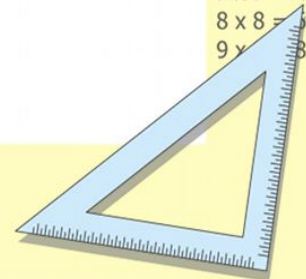
$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$

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



$y = \cos$

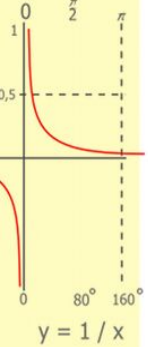
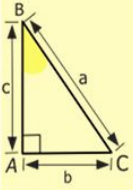
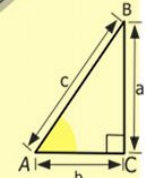
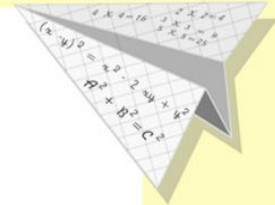
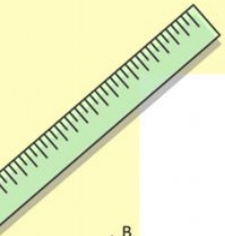
- $2 \times 2 = 4$
- $3 \times 3 = 9$
- $4 \times 4 = 16$
- $5 \times 5 = 25$
- $6 \times 6 = 36$
- $7 \times 7 = 49$
- $8 \times 8 = 64$
- $9 \times 9 = 81$



# Оцени себя

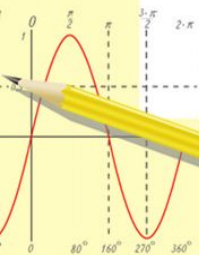
- 4 правильно – «5»
- 3 правильно – «4»
- 2 правильно – «3»

Поставь на полях  
оценку!



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

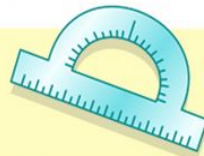
$$\begin{array}{l} 2 \times 2 = 4 \\ 3 \times 3 = 9 \\ 4 \times 4 = 16 \\ 5 \times 5 = 25 \\ 6 \times 6 = 36 \\ 7 \times 7 = 49 \\ 8 \times 8 = 64 \\ 9 \times 9 = 81 \end{array}$$



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

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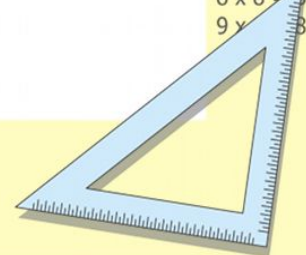
$$\sin 90^\circ = 1$$



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

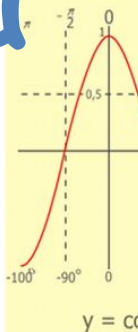
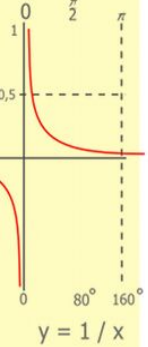
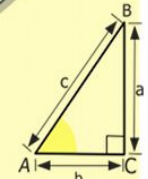
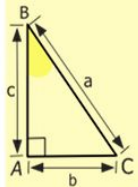
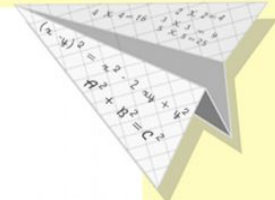
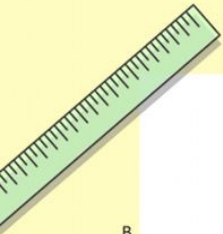
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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





# Устный счет - математическая зарядка



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

- $2 \times 2 = 4$
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- $4 \times 4 = 16$
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- $7 \times 7 = 49$
- $8 \times 8 = 64$
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$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

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

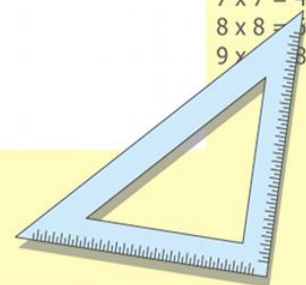
$$\sin 90^\circ = 1$$



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

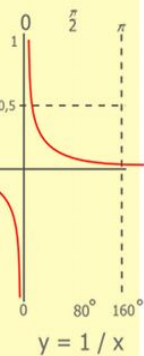
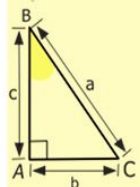
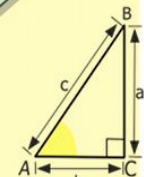
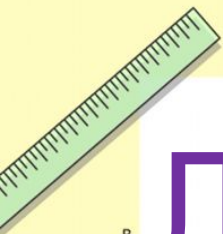
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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



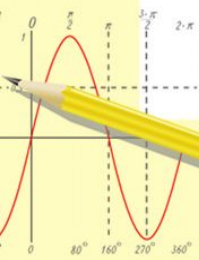
# Старинная задача

Лев съедает овцу за 2 дня, волк – за 3 дня, а собака – за 6 дней. За какое время они вместе съедят овцу?



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

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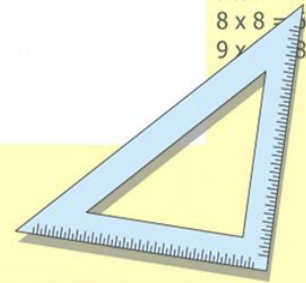
$$\sin 90^\circ = 1$$

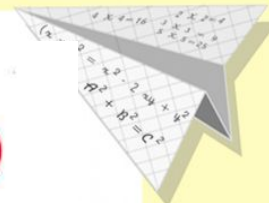


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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

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





# Физкультминутка

Поднимает руки класс – это «раз».

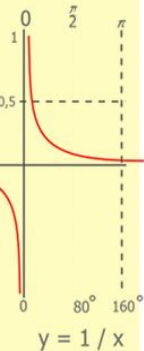
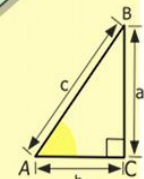
Повернулась голова – это «два».

Руки вниз, вперед смотри – это «три».

Руки в стороны пошире развернули на «четыре».

С силой их к плечам прижать – это «пять».

Всем ребятам надо сесть – это «шесть».



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



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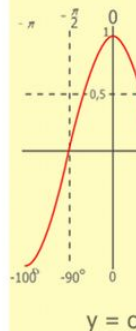
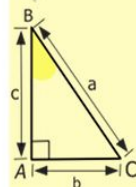
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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



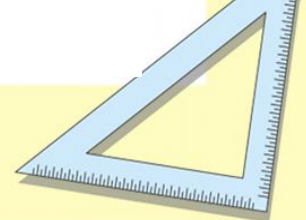
$$\begin{cases} x = 25y + 45 \\ y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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



$$y = \cos$$

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# Решаем вместе(парами)

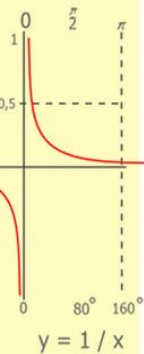
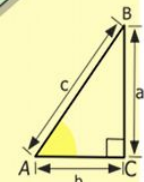
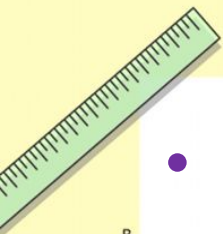
- а)  $23 \frac{2}{3} - 3 \frac{1}{2}$ ;

- б)  $15 \frac{1}{2} - 8 \frac{5}{8}$ ;

- в)  $5 \frac{3}{5} + 4 \frac{2}{5}$ ;

- г)  $3 \frac{2}{3} + 1/18$ ;

- д)  $1 - 2/3$ .



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

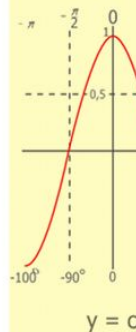
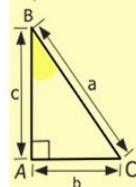
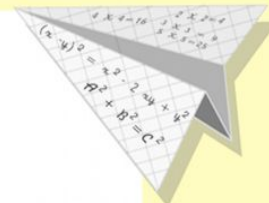
$$\sin 90^\circ = 1$$



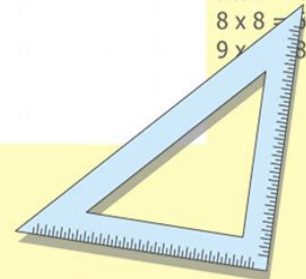
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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

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

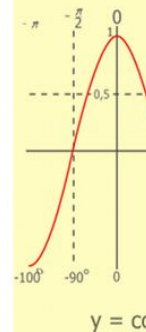
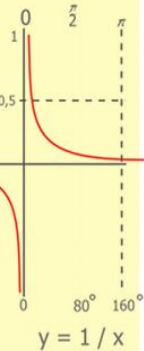
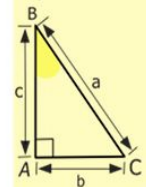
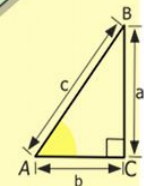
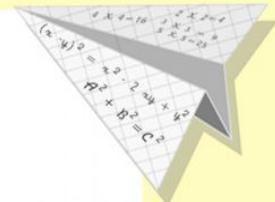
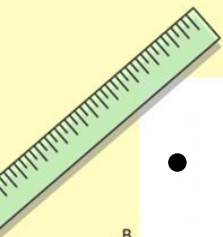


$$\begin{array}{l} 2 \times 2 = 4 \\ 3 \times 3 = 9 \\ 4 \times 4 = 16 \\ 5 \times 5 = 25 \\ 6 \times 6 = 36 \\ 7 \times 7 = 49 \\ 8 \times 8 = 64 \\ 9 \times 9 = 81 \end{array}$$



# Проверь себя

- а)  $23 \frac{4}{6} - 3 \frac{3}{6} = 20 \frac{1}{6}$
- б)  $15 \frac{4}{8} - 8 \frac{5}{8} = 14 \frac{12}{8} - 8 \frac{5}{8} = 6 \frac{7}{8}$
- в)  $5 \frac{3}{5} + 4 \frac{2}{5} = 10$
- г)  $3 \frac{2}{3} + 1/18 = 3 \frac{13}{18}$
- д)  $1 - 2/3 = 1/3$



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

- 2 x 2 = 4
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- 4 x 4 = 16
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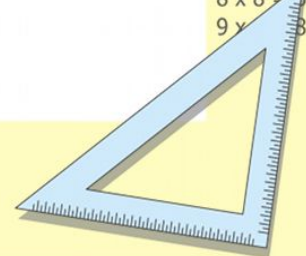
$$\sin 90^\circ = 1$$



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

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

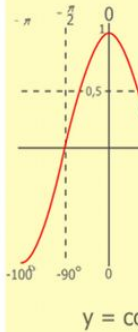
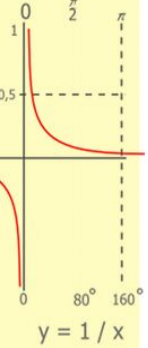
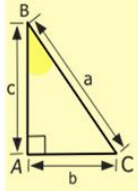
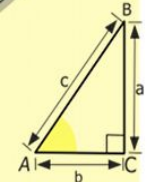
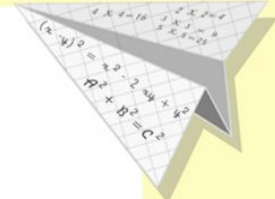
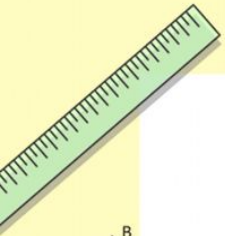
$$(x+y)(x-y) = x^2 - y^2$$



# Оцени себя

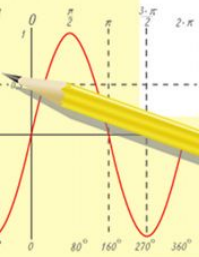
- 5 правильно – «5»
- 4 правильно – «4»
- 3 правильно – «3»

• Поставь оценку на полях!



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

- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
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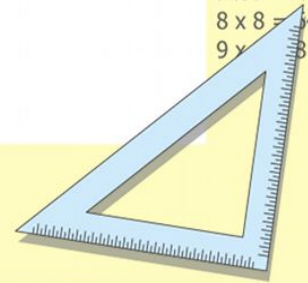
$$\sin 90^\circ = 1$$



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

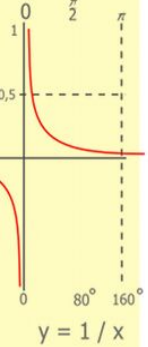
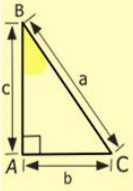
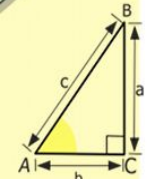
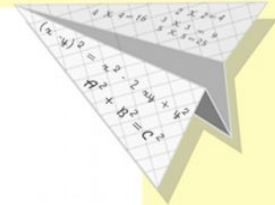
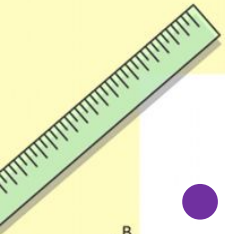
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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



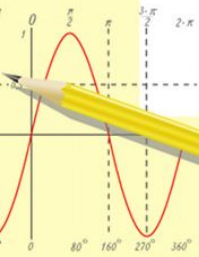
# Загадка?????

- В русском языке это слово появилось в VIII веке, оно происходит от глагола “дробить” - разбивать, ломать на части.



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

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



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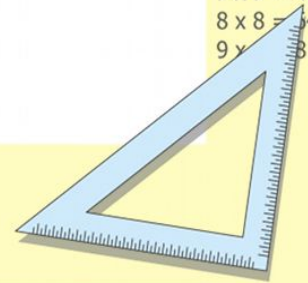
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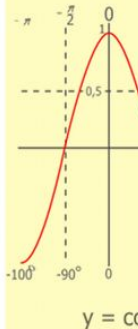
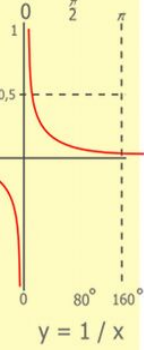
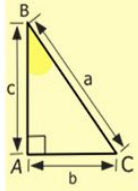
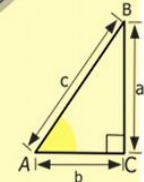
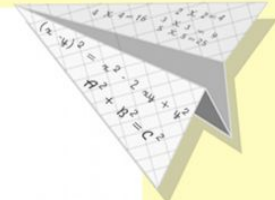
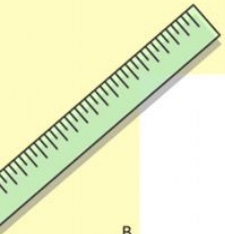


# Решить уравнения

- $26 \frac{5}{8} + a = 30$

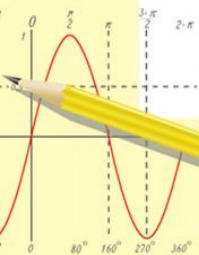
- $11 \frac{1}{4} - x = 3 \frac{7}{10}$

- $256 \frac{3}{8} - y = 0$



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

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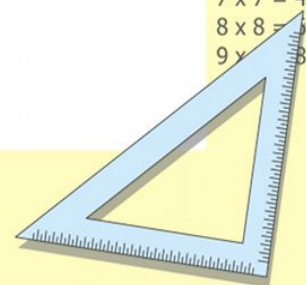
$$\sin 90^\circ = 1$$



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

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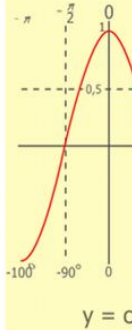
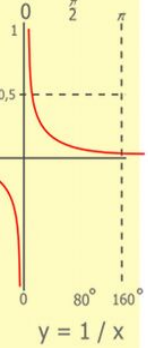
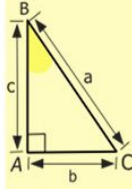
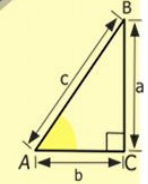
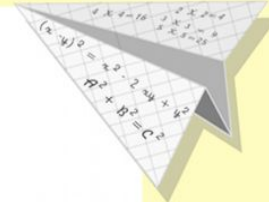
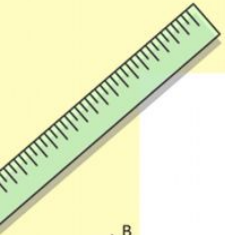


# Проверь

• 3 3/8

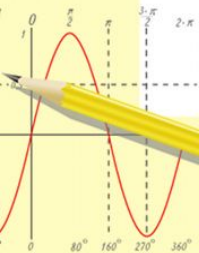
• 7 11/20

• 256 3/8



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

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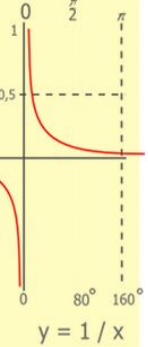
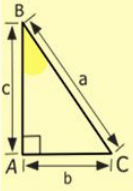
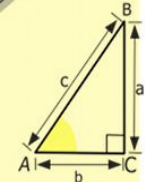
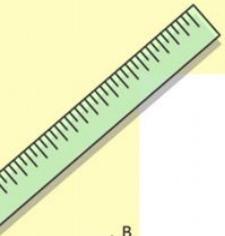
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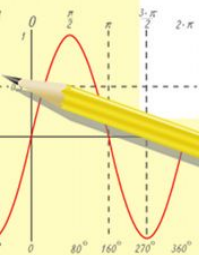
# Оцени себя

- 3 правильно – «5»
- 2 правильно – «4»
- 1 правильно – «3»
- Поставь оценку на полях!



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

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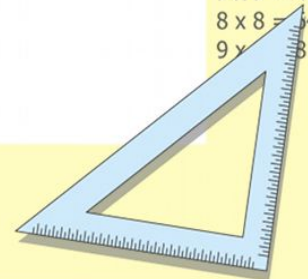
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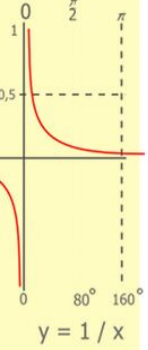
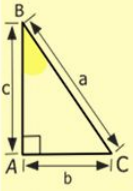
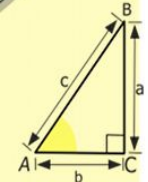
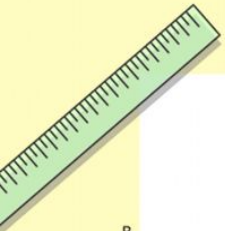
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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# Подведение итога урока.

- Посчитайте, каких оценок больше всего на полях? Такую оценку вы заработали за урок! Молодцы!!!
- Довольны ли вы своими успехами?
- Желаящие высказаться по уроку... умею решать такие примеры, затрудняюсь на некоторых примерах, нужно еще поработать и все станет получаться, ничего не получается и не понимаю...



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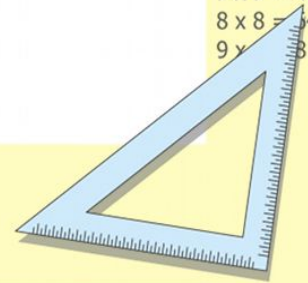
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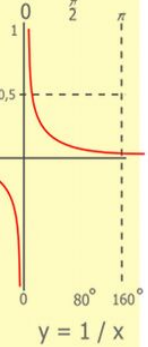
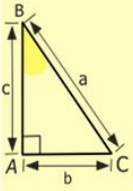
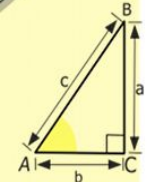
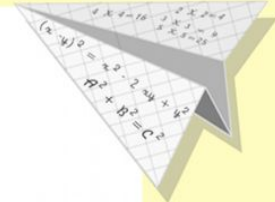
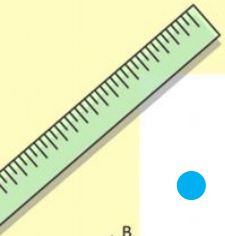




# Домашнее задание

- Составить кроссворд по всем изученным темам 6 класса

Спасибо за урок!!!!



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