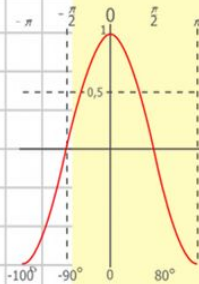
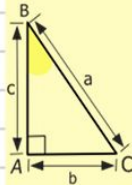
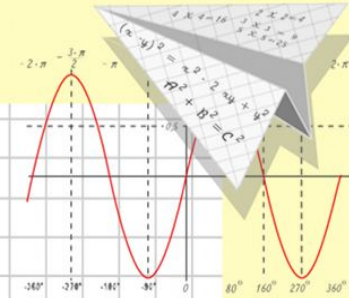
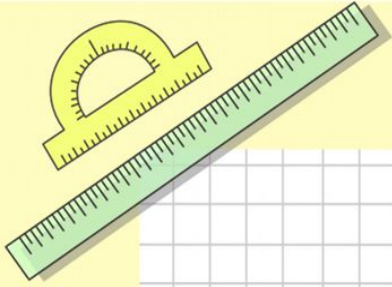


Математик

а

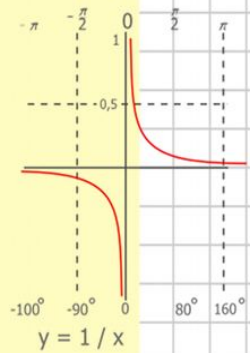
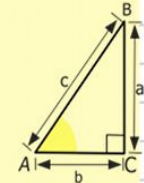
«Умножение обыкновенных дробей»

Составила Авраменко О.И.
Учитель математики 1 категории
МОАУ СОШ с. Великокнязевки



$y = \cos x$

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



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



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

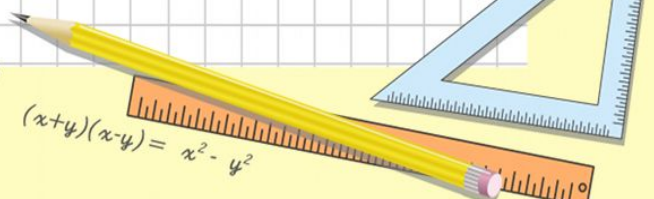
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$



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

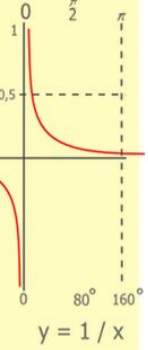
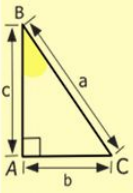
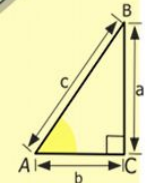
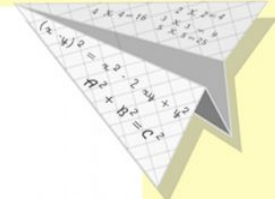
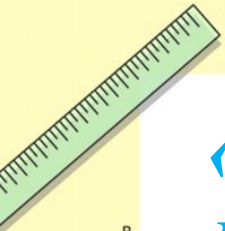


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \\ y = 1 \\ x = 25 + 45 \\ x = 70 \end{cases}$$



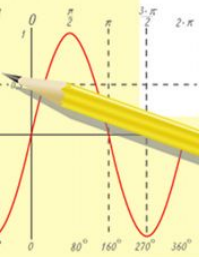
$$(x+y)(x-y) = x^2 - y^2$$

«Чтобы спорилось нужное дело,
 Чтобы в жизни не знать неудач,
 Мы в поход отправляемся смело,-
 В мир загадок и сложных задач.
 Не беда что идти далеко
 Не боимся, что путь будет труден
 Достижения крупные людям
 Никогда не давались легко».



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

- 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



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

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

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



$$\begin{cases} y = \sin 90^\circ \\ x = 25y \end{cases}$$

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

$$\frac{x}{70}$$



Математик

а Игра «Лото»

Выполните сложение

$$\frac{1}{9} + \frac{4}{9}$$

Выполните вычитание

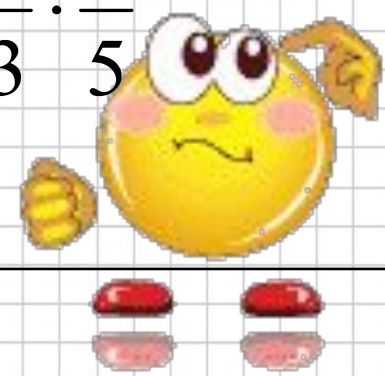
$$\frac{7}{24} - \frac{1}{4}$$

Сократите дробь

$$\frac{24}{32}$$

Выполните умножение

$$\frac{2}{3} \cdot \frac{4}{5}$$



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

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

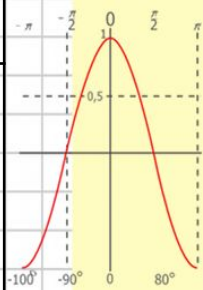
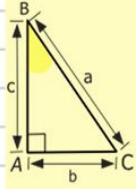
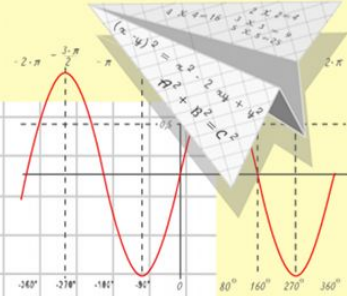
$$\sin 90^\circ = 1$$

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

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

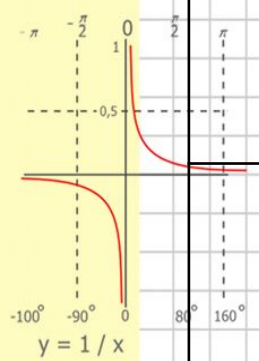
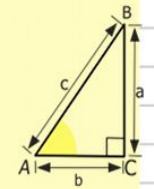
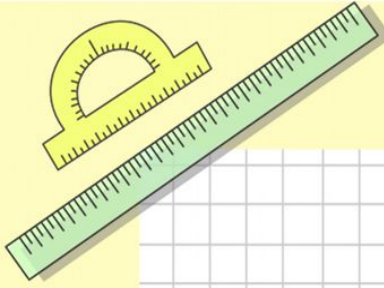
$$x = 70$$

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

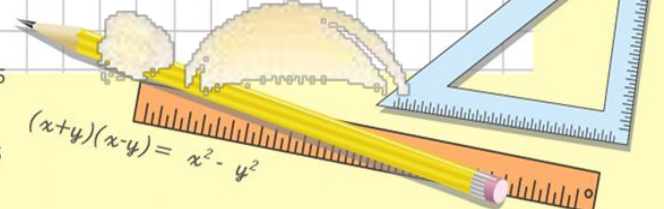


y = cos x

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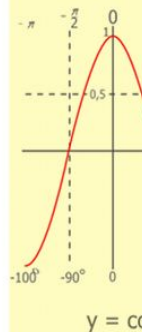
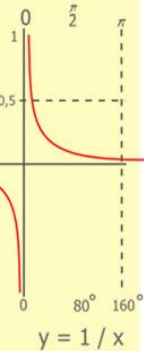
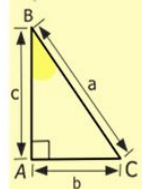
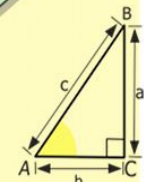
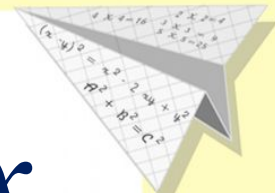
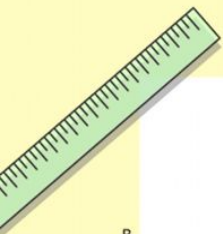
$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 10500 \end{array}$$



Тема урока:

«Умножение обыкновенных дробей»

Цель урока: *Научиться умножать обыкновенные дроби, вывести правило умножения обыкновенных дробей*



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

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



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

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

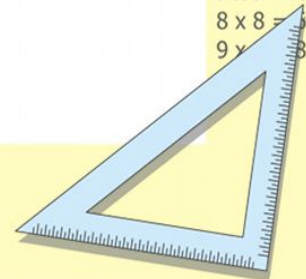
$$\sin 90^\circ = 1$$



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

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

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

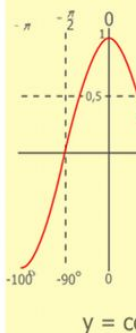
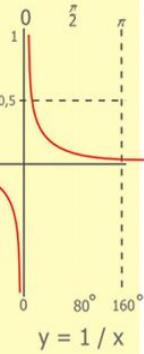
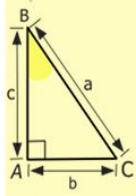
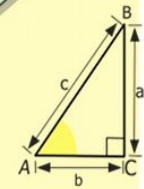
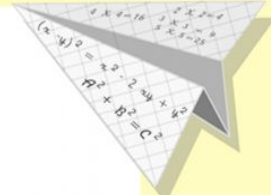
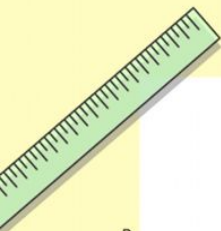


Чему равна площадь прямоугольника ?



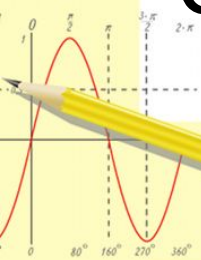
$$4 \cdot 5 = 20 \text{ кв. CM}$$

$$\frac{4}{10} \cdot \frac{5}{10} = \frac{20}{100}$$



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

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

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

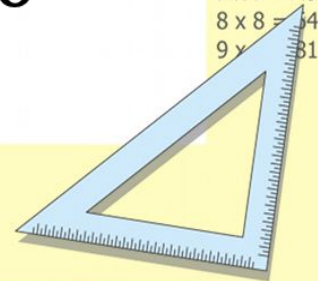
$$\sin 90^\circ = 1$$



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

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

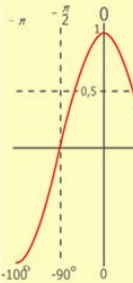
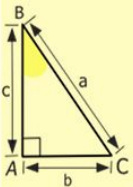
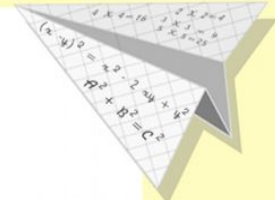
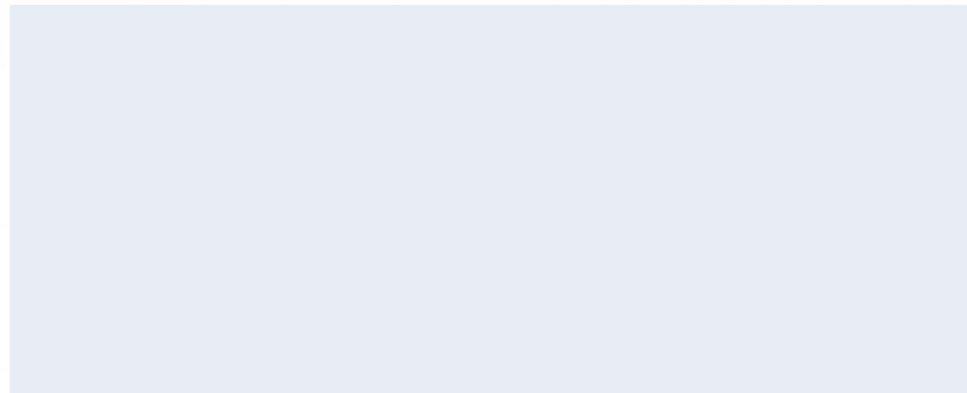
$$(x+y)(x-y) = x^2 - y^2$$



Результат исследования



$$\frac{a}{b} \cdot \frac{m}{n} = \frac{a \cdot m}{b \cdot n}$$



$y = \cos$

- $2 \times 2 = 4$
- $3 \times 3 = 9$
- $4 \times 4 = 16$
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- $9 \times 9 = 81$

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

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

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$\sin 90^\circ = 1$

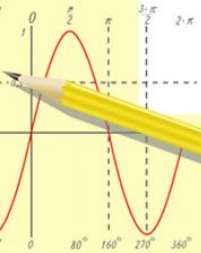
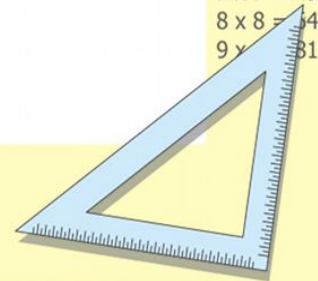


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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$x = 70$

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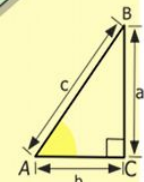
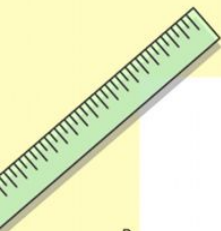


Работа экспертов

$$\frac{4}{9} \cdot \frac{3}{5} = \frac{4 \cdot 3}{9 \cdot 5} = \frac{12}{47};$$

$$\frac{3}{4} \cdot \frac{2}{5} = \frac{3 \cdot 2}{4 \cdot 5} = \frac{6}{20}$$

$$\frac{3}{4} \cdot \frac{7}{5} = \frac{3 \cdot 7}{4 \cdot 5} = \frac{21}{20}$$



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



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

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

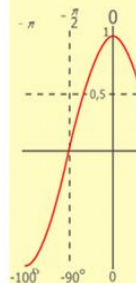
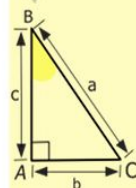
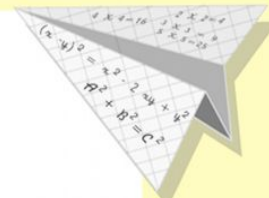
$$\sin 90^\circ = 1$$



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

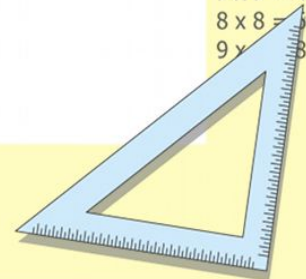
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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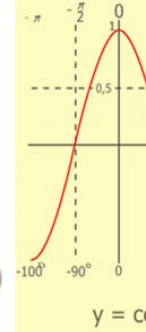
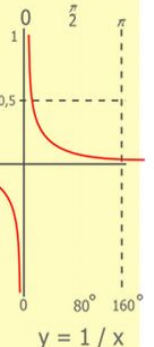
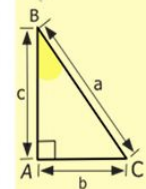
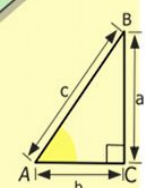
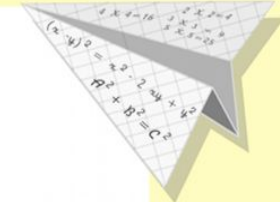
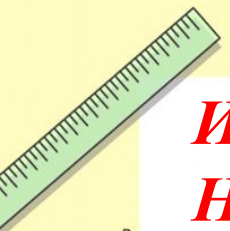


$$y = \cos$$

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



*Из - за парт мы выйдем дружно,
 Но шуметь совсем не нужно,
 Мы все вместе улыбнемся,
 Подмигнем слегка друг другу,
 Вправо, влево повернемся (повороты влево- вправо)
 И кивнем затем по кругу. (наклоны влево-вправо)
 Все идеи победили,
 Вверх взметнулись наши руки. (поднимают руки
 вверх- вниз)
 Груз забот с себя стряхнули
 И продолжим путь науки.
 (встряхнули кистями рук)*



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

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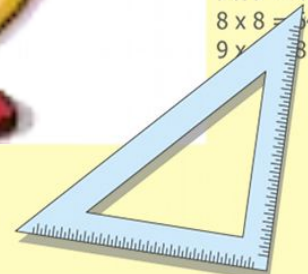
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$$(x+y)(x-y) = x^2 - y^2$$



Вычислите:

1 вариант

$$\frac{2}{7} \cdot \frac{3}{9}$$

$$\frac{3}{4} \cdot \frac{3}{5}$$

$$\frac{2}{3} \cdot \frac{9}{7}$$

$$\frac{2}{3} \cdot \frac{9}{7}$$

$$\frac{2}{3} \cdot \frac{9}{7}$$

$$\frac{2}{3} \cdot \frac{9}{7}$$

2 вариант

$$\frac{1}{4} \cdot \frac{2}{6}$$

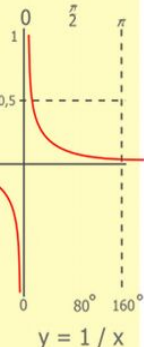
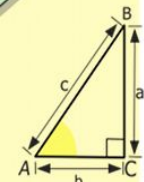
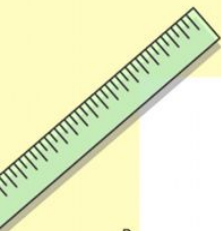
$$\frac{7}{8} \cdot \frac{9}{10}$$

$$\frac{2}{11} \cdot \frac{9}{7}$$

$$\frac{2}{11} \cdot \frac{9}{7}$$

$$\frac{2}{11} \cdot \frac{9}{7}$$

$$\frac{2}{11} \cdot \frac{9}{7}$$



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



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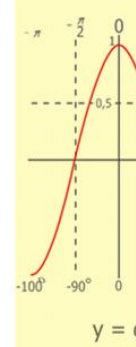
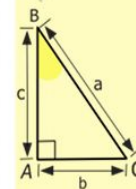
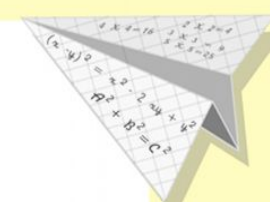
$$\sin 90^\circ = 1$$



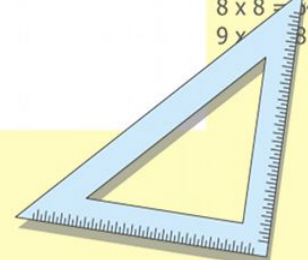
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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

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



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



Самостоятельная работа

1 вариант

2 вариант

1)

$$\frac{5}{9} \cdot \frac{1}{8} = \frac{5}{72}$$

1)

$$\frac{4}{9} \cdot \frac{1}{7} = \frac{4}{63}$$

2)

$$\frac{7}{5} \cdot \frac{1}{6} = \frac{7}{30}$$

2)

$$\frac{7}{3} \cdot \frac{1}{4} = \frac{7}{12}$$

3)

$$\frac{6}{11} \cdot \frac{2}{3} = \frac{6 \cdot 2}{11 \cdot 3} = \frac{2 \cdot 2}{11 \cdot 1} = \frac{4}{11}$$

3)

$$\frac{4}{11} \cdot \frac{3}{5} = \frac{4 \cdot 3}{11 \cdot 5} = \frac{12}{55}$$

4)

$$\frac{2}{5} \cdot \frac{9}{10} = \frac{2 \cdot 9}{5 \cdot 10} = \frac{1 \cdot 9}{5 \cdot 5} = \frac{9}{25}$$

4)

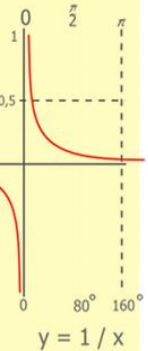
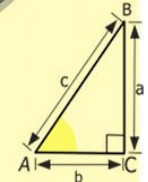
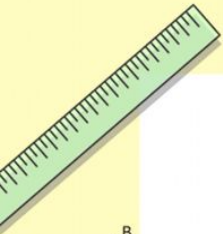
$$\frac{2}{7} \cdot \frac{3}{10} = \frac{2 \cdot 3}{7 \cdot 10} = \frac{1 \cdot 3}{7 \cdot 5} = \frac{3}{35}$$

5)

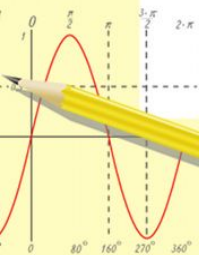
$$\frac{10}{19} \cdot \frac{2}{3} = \frac{10 \cdot 2}{19 \cdot 3} = \frac{20}{57}$$

5)

$$\frac{10}{17} \cdot \frac{2}{3} = \frac{10 \cdot 2}{17 \cdot 3} = \frac{20}{51}$$



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



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

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

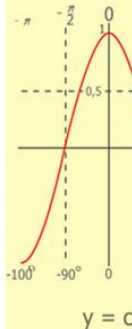
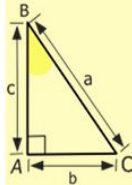
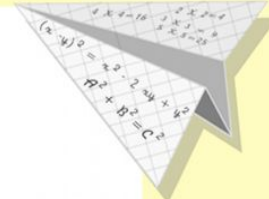
$$\sin 90^\circ = 1$$



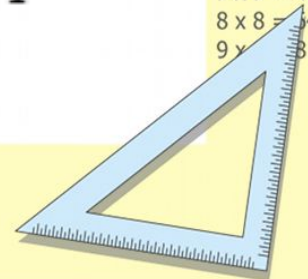
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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

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

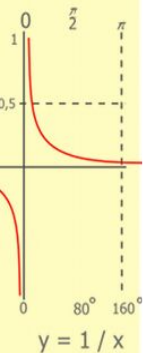
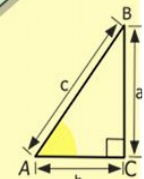
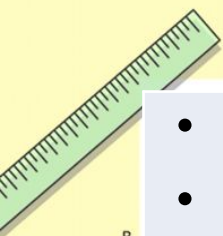


$$\begin{array}{l} 2 \times 2 = 4 \\ 3 \times 3 = 9 \\ 4 \times 4 = 16 \\ 5 \times 5 = 25 \\ 6 \times 6 = 36 \\ 7 \times 7 = 49 \\ 8 \times 8 = 64 \\ 9 \times 9 = 81 \end{array}$$

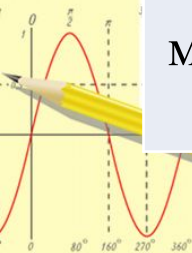


Игра «Микрофон»

- сегодня я узнал...
 - было интересно...
 - было трудно...
 - я выполнял задания...
 - я понял, что...
 - теперь я могу...
 - я почувствовал, что...
 - я приобрел...
 - я научился...
 - у меня получилось ...
 - я смог...
 - я попробую...
 - меня удивило...
 - урок дал мне для жизни...
- мне захотелось...



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



$$\sin A = \sin B = \sin C$$

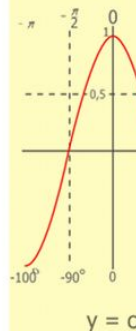
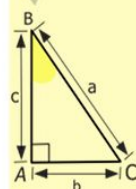
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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

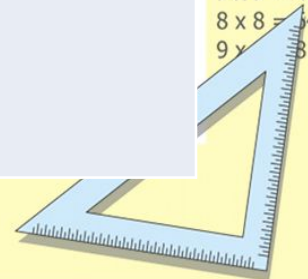


$$\begin{array}{l} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{array}$$

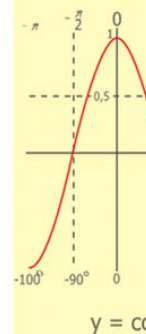
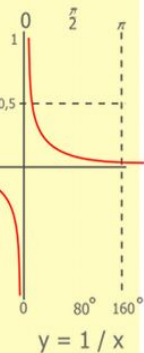
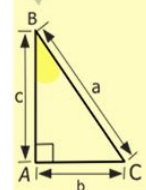
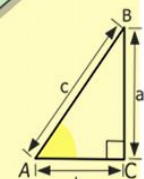
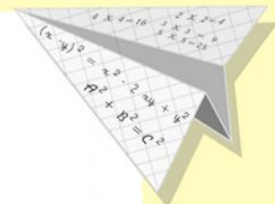
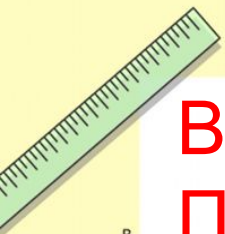
$$(x+y)(x-y) = x^2 - y^2$$



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Вот закончился урок,
 Подведём сейчас итог,
 Много вспомнили, друзья,
 Без этого никак нельзя.
 Правила мы изучили,
 На практике их применили
 Задачи, находя решение,
 Развивают мышление,
 Память и внимание,
 Закрепляли знания.
 А теперь, внимание,
 Домашнее задание:



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

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



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

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

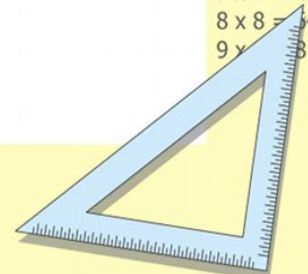
$$\sin 90^\circ = 1$$



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

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

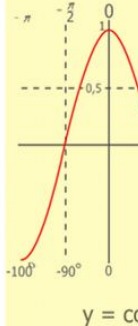
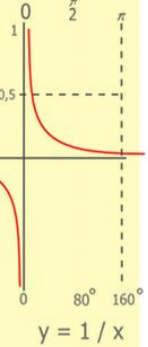
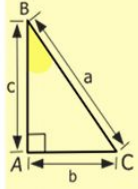
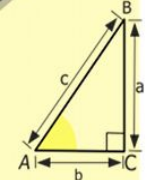
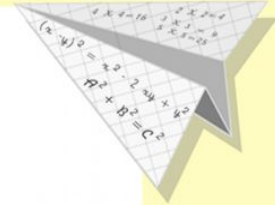
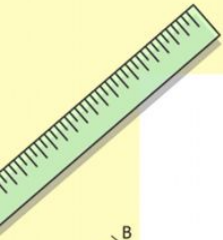
$$(x+y)(x-y) = x^2 - y^2$$



Домашнее задание

с. 166, п.35 (читать)

с.168, № 594 (выполнить)



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

- $2 \times 2 = 4$
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- $4 \times 4 = 16$
- $5 \times 5 = 25$
- $6 \times 6 = 36$
- $7 \times 7 = 49$
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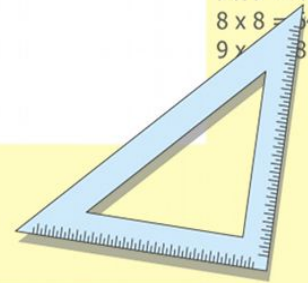
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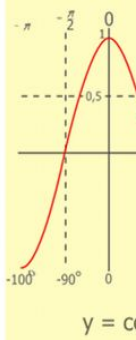
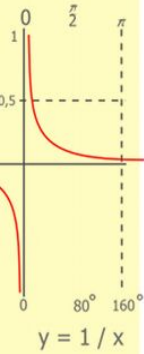
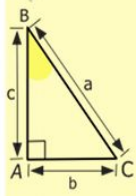
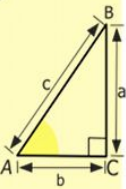
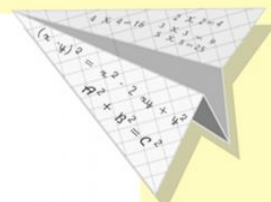
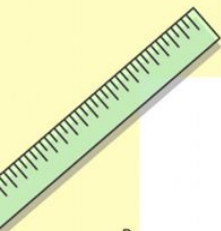


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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

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





Спасибо вам за урок!



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

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