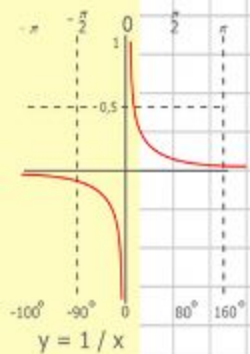
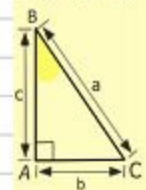
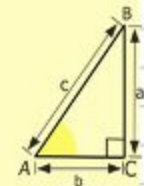
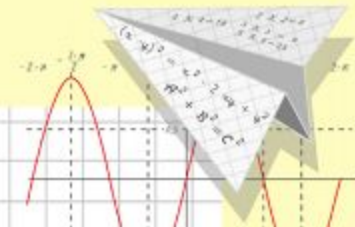
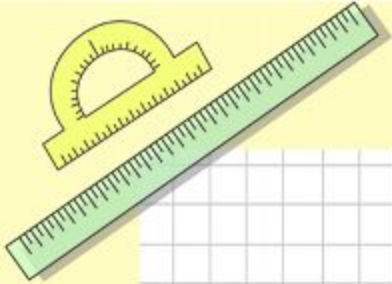


Математик

а

Устный счет на уроках математики (для 5 и 6 классов)

Подготовила: учитель математики Пташкина Наталья Вячеславовна



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

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



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

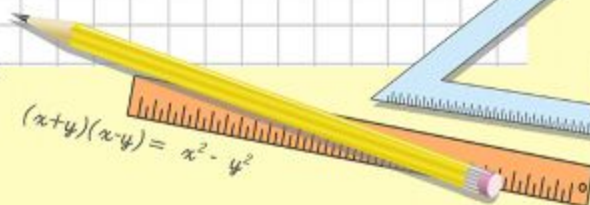
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$



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



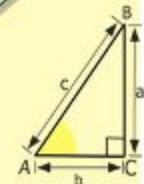
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \\ y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$



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

Оглавление

- Чтение натуральных чисел.
- Действие с натуральными числами
- Порядок выполнения действий
- Умножение натуральных чисел
- Деление натуральных чисел
- Сравнение натуральных чисел
- Шкалы и координаты
- Решение уравнений
- Площадь прямоугольника
- Объем прямоугольного параллелепипеда
- Доли. Обыкновенные дроби
- Сравнение дробей
- Умножение и деление десятичных дробей на натуральные числа
- Умножение десятичных дробей
- Деление десятичных дробей
- Проценты



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



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

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

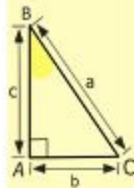
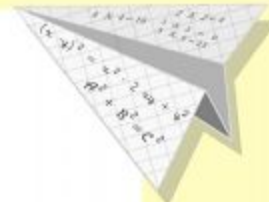
$$\sin 90^\circ = 1$$



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

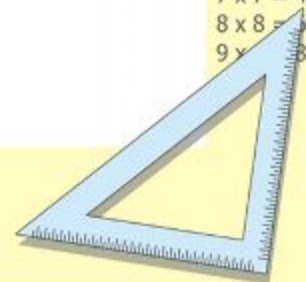
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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



$$y = \cos$$

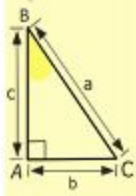
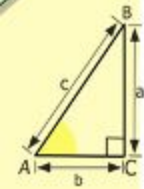
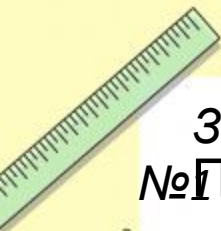
$$\begin{array}{l} 2 \times 2 = 4 \\ 3 \times 3 = 9 \\ 4 \times 4 = 16 \\ 5 \times 5 = 25 \\ 6 \times 6 = 36 \\ 7 \times 7 = 49 \\ 8 \times 8 = 64 \\ 9 \times 9 = 81 \end{array}$$



Чтение натуральных чисел

Задание №1 Прочитайте числа:

- 12, 123;
 - 43, 211;
 - 334, 563, 456;
 - 75, 342, 345;
 - 380, 907;
 - 60 239;
 - 102 400;
 - 999 999;
 - 999 999.
- 12, 123;
 - 43, 211;
 - 334, 563, 456;
 - 75, 342, 345;
 - 380, 907;
 - 60 239;
 - 102 400;
 - 999 999;
 - 1 000 100 999.



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

- 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
- 9 x 9 = 81



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

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

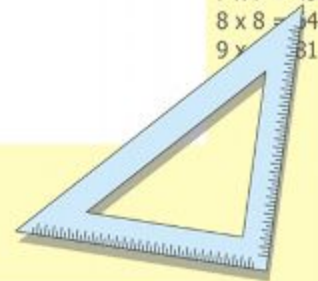
$$\sin 90^\circ = 1$$



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

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

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



Чтение натуральных чисел

Задание

Что ^{№2} означает цифра 5 в записи каждого из этих чисел?

- 15, 152, 514, 2 537, 5 007, 52 615

Задание

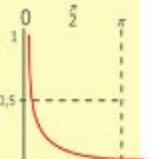
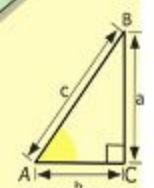
Что ^{№3} означает 0 в записи каждого из чисел?

- 30, 409, 60 523, 700 009

Задание

Назовите число:

- а) следующее за числом 99;
- б) предшествующее числу 300;
- в) следующее за числом 19 999;
- г) предшествующее числу 1 200;
- д) на 1 меньше числа 700;
- е) на 1 больше числа 8 999.



$$y = 1/x$$

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



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

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

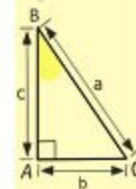
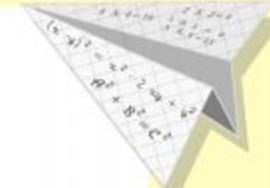
$$\sin 90^\circ = 1$$



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

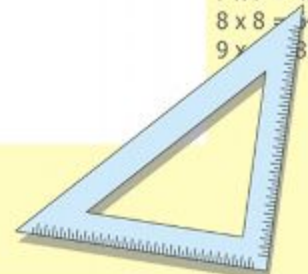
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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



$$y = \cos$$

- 2 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



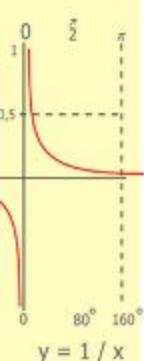
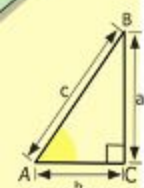
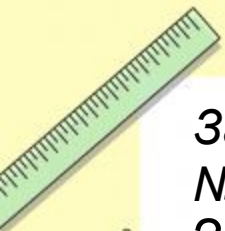
Чтение натуральных чисел

Задание

№5

Запишите в тетради цифрами числа:

- Сто восемьдесят один.
- Восемьсот девять.
- Пять тысяч двести одиннадцать.
- Триста восемь тысяч восемьдесят девять.
- Двести шестьдесят пять тысяч девяноста три.
- Восемь миллионов сорок пять.
- Пятьсот семь миллионов восемьдесят тысяч.
- Сорок миллионов девятьсот двадцать одна тысяча один.
- Четыреста двадцать три миллиарда триста миллионов.
- Пятьдесят два миллиарда восемь тысяч двенадцать.
- Девять миллиардов сто пять тысяч.



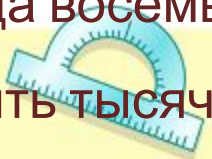
$$\begin{array}{r} \frac{1}{2} 500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 105000 \end{array}$$



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

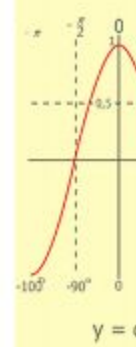
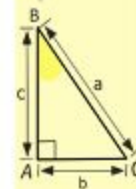
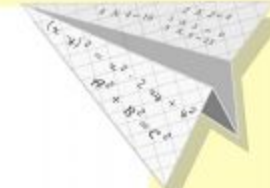
$$b = a + b$$

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

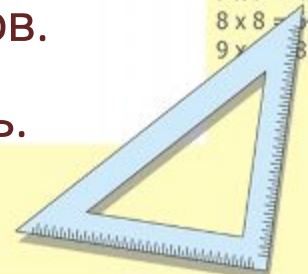


$$\begin{cases} x = 25y + 45 \\ y = 1 \end{cases}$$
$$\frac{x = 25 + 45}{x = 70}$$

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



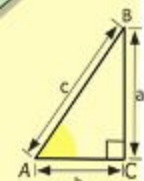
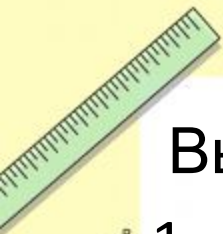
$$\begin{array}{l} 2 \times 2 = 4 \\ 3 \times 3 = 9 \\ 4 \times 4 = 16 \\ 5 \times 5 = 25 \\ 6 \times 6 = 36 \\ 7 \times 7 = 49 \\ 8 \times 8 = 64 \\ 9 \times 9 = 81 \end{array}$$



Вычитание натуральных чисел

Выполните устно вычитание:

1. $187 - 80 = ?$
2. $589 - 189 = ?$
3. $1\ 250 - 350 = ?$
4. $3\ 000 - 11 = ?$
5. $54\ 273 - 200 = ?$
6. $43\ 156 - 3\ 000 = ?$
7. $78\ 005 - 78\ 000 = ?$
8. $45\ 087 - 50871 = ?$
9. $2\ 222\ 222\ 222 - 2\ 000\ 000\ 000 = ?$
10. $1\ 234\ 567\ 890 - 1\ 234\ 567\ 800 = ?$



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



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

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

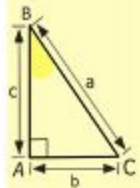
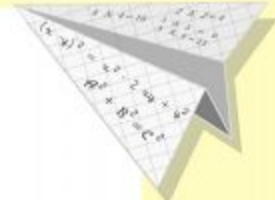
$$\sin 90^\circ = 1$$



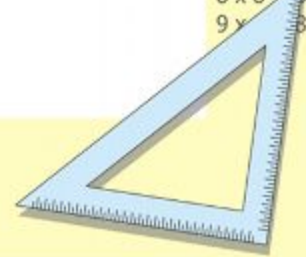
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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

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



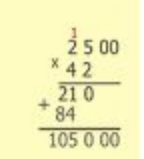
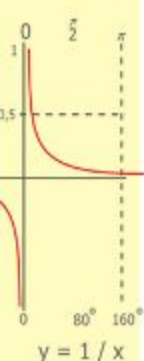
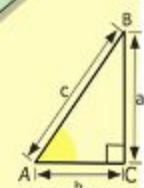
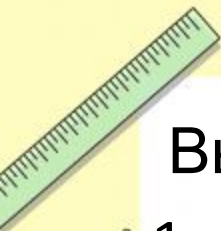
- $2 \times 2 = 4$
- $3 \times 3 = 9$
- $4 \times 4 = 16$
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- $6 \times 6 = 36$
- $7 \times 7 = 49$
- $8 \times 8 = 64$
- $9 \times 9 = 81$



Сложение натуральных чисел

Выполните сложение:

1. $1\ 693 + 307 = ?$
2. $128 + 22 = ?$
3. $167 + 523 = ?$
4. $57\ 854 + 3\ 006 = ?$
5. $60\ 000 + 7\ 000 + 300 + 50 + 9 = ?$
6. $8\ 000 + 6\ 000 + 1 = ?$
7. $900\ 000 + 3\ 000 + 700 + 20 = ?$
8. $1\ 000 + 3\ 541 + 9 = ?$
9. $28\ 999\ 999\ 999 + 1 = ?$
10. $1\ 234 + 106 = ?$



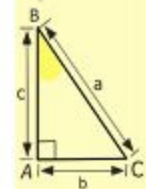
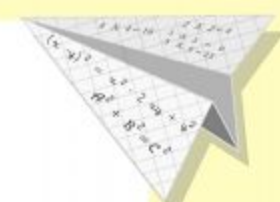
$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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

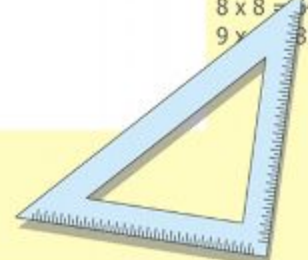


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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



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



Умножение натуральных чисел

Заполните таблицу:

Множитель		6	11	23		33	6
Множитель	8			4	2	3	
Произведение	96	54	55		18		138

Множитель	12		11		17	8	
Множитель	5	15		14		10	20
Произведение		30	99	70	51		120

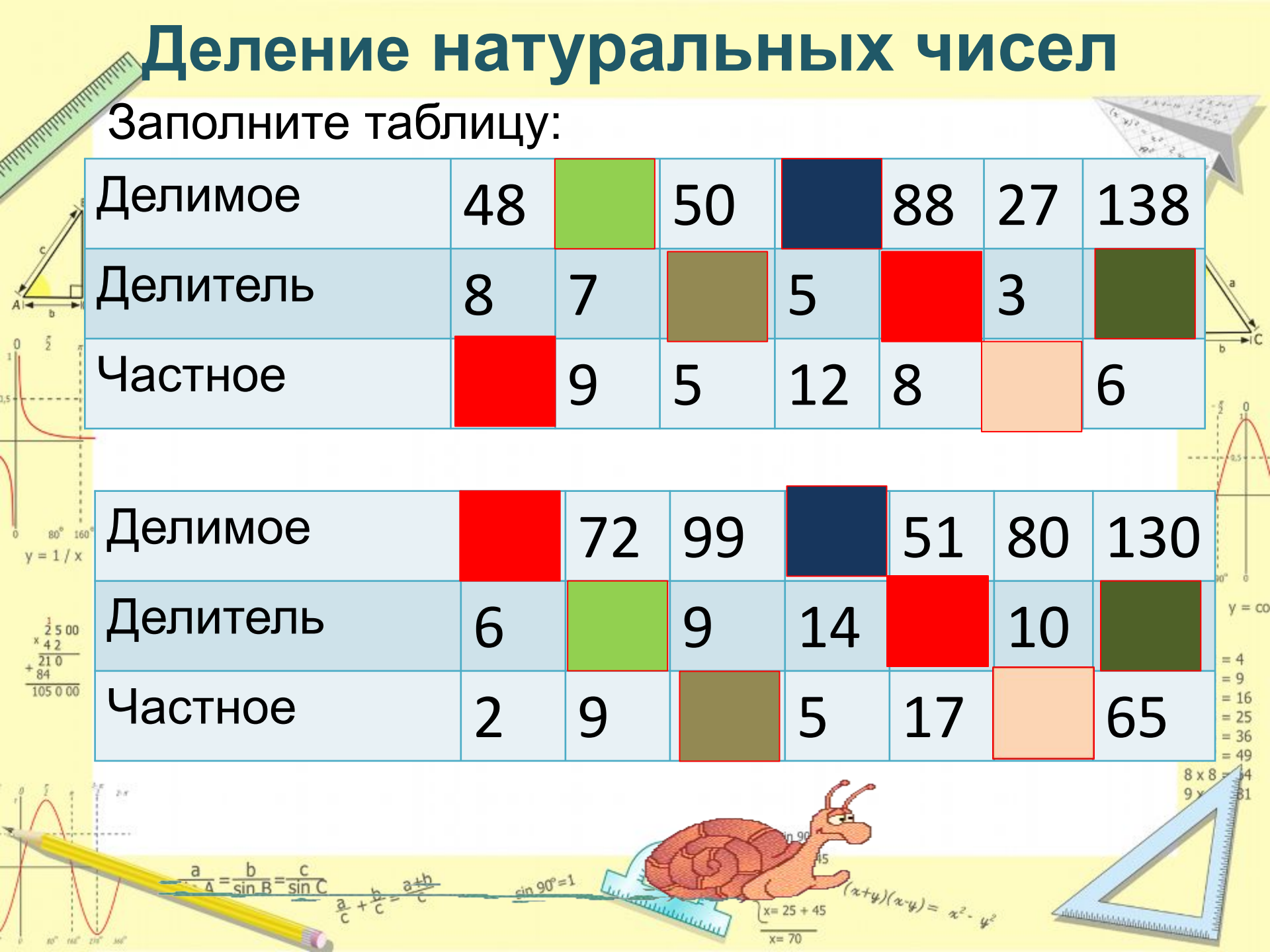


Деление натуральных чисел

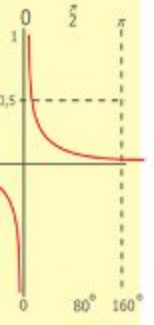
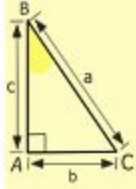
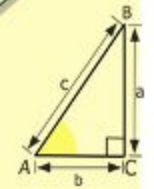
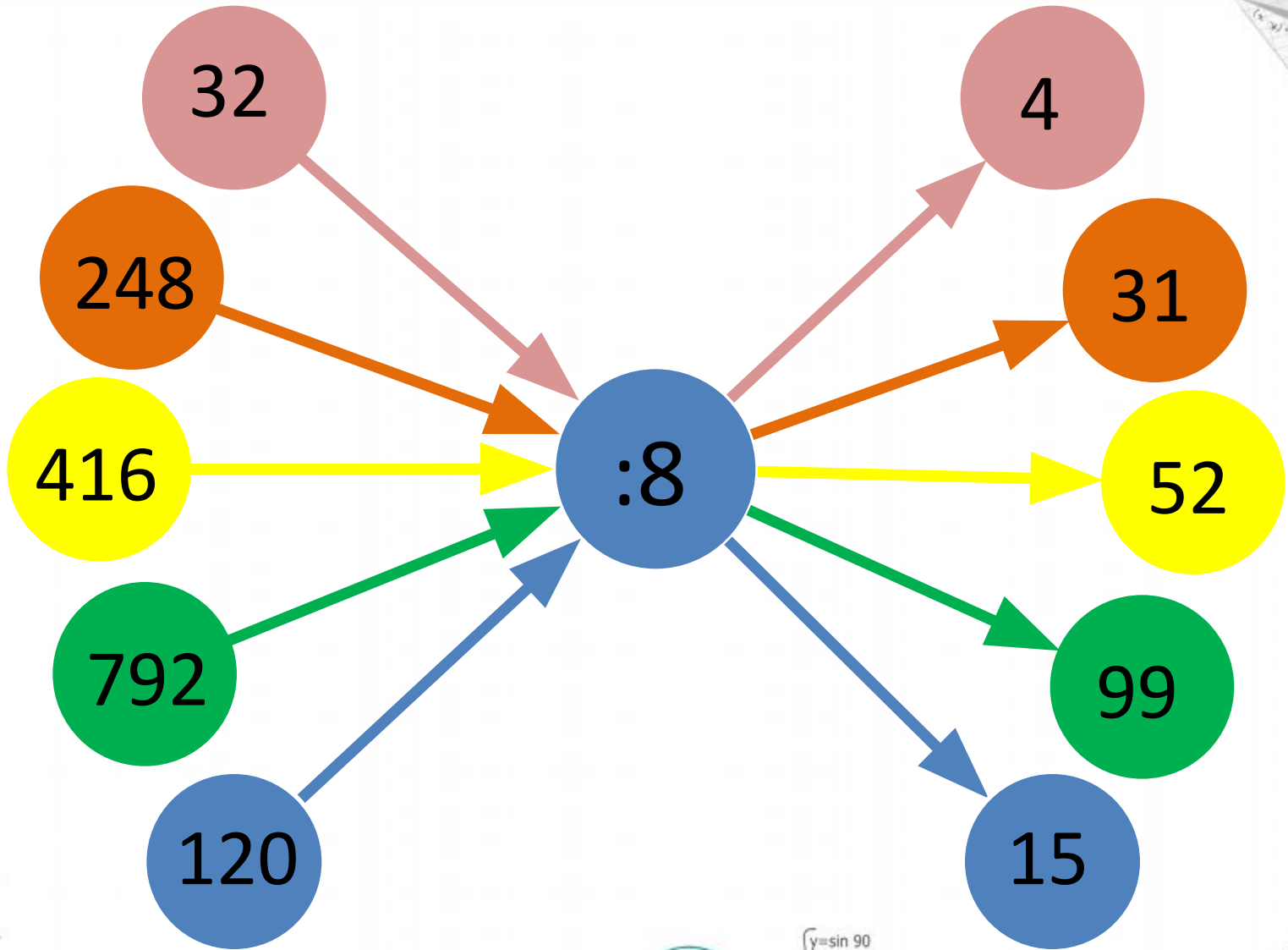
Заполните таблицу:

Делимое	48		50		88	27	138
Делитель	8	7		5		3	
Частное		9	5	12	8		6

Делимое		72	99		51	80	130
Делитель	6		9	14		10	
Частное	2	9		5	17		65



Деление натуральных чисел



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

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



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

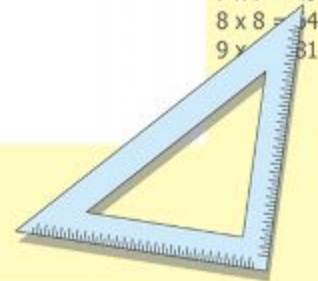
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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



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

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



Действия с натуральными

числами

Задание

№2

Вычислите устно:

а) $8+7$;

$16+9$;

$28+36$;

$19+25$;

$37+12$

б) $11-3$;

$16-7$;

$35-27$;

$94-18$;

$66-55$

в) $9*8$;

$6*7$;

$8*8$;

$5*9$;

$70*10$;

$12*4$;

$34*17$;

$29*15$.

г) $45:9$;

$36:6$;

$48:6$;

$56:7$;

$81:9$;

$40:8$;

$60:12$;

$92:4$.

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

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

$\sin 90^\circ = 1$

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

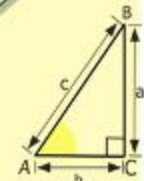
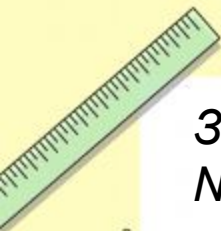
$\begin{cases} y = 1 \\ x = 25 + 45 \end{cases}$

$x = 70$

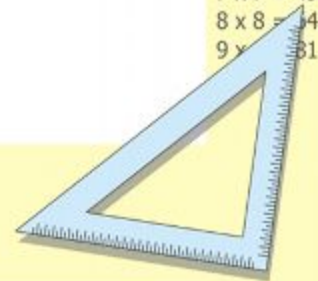
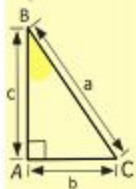
$(x+y)(x-y) = x^2 - y^2$



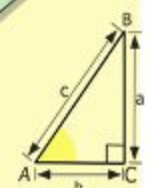
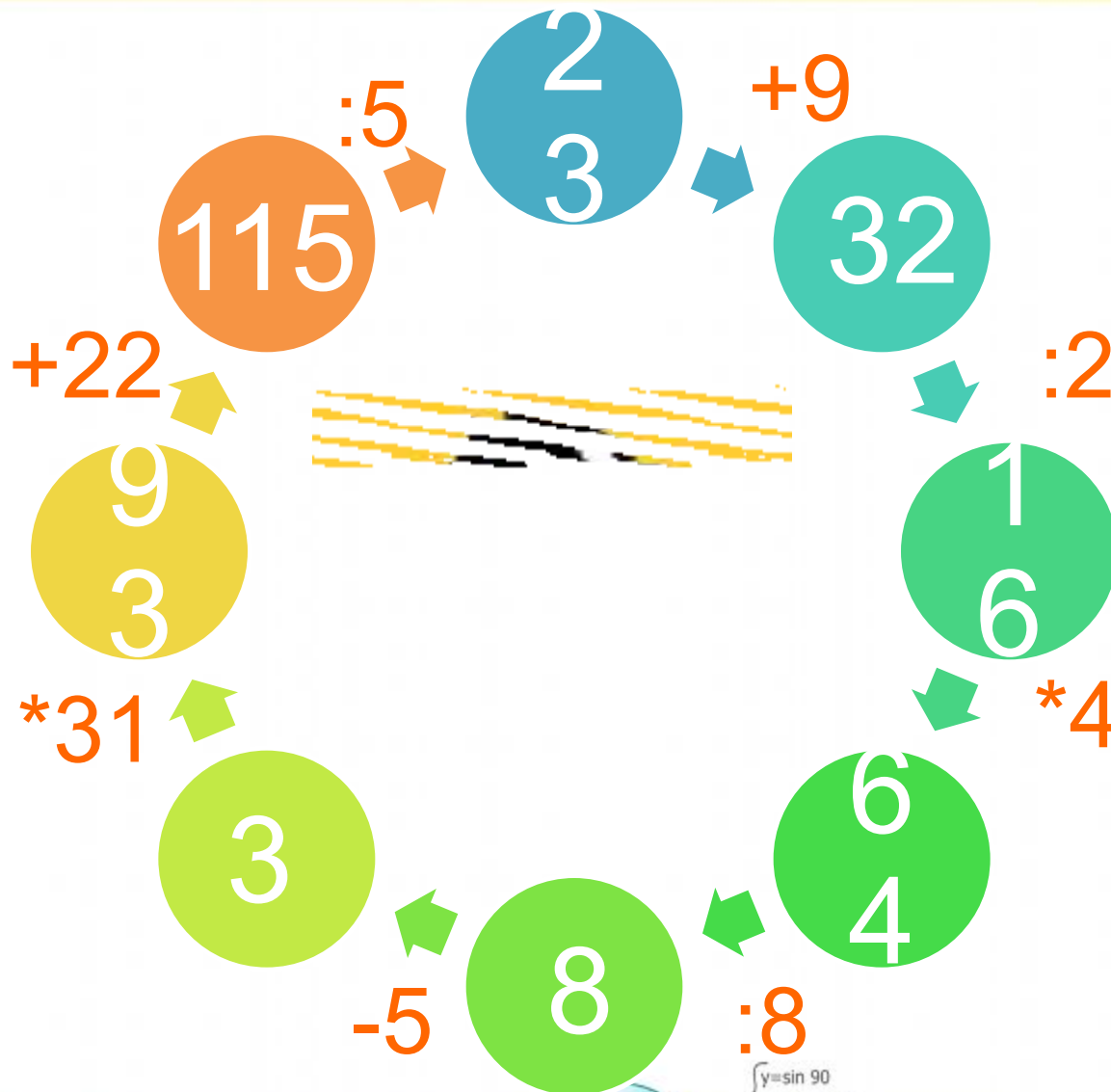
- $2 \times 2 = 4$
- $3 \times 3 = 9$
- $4 \times 4 = 16$
- $5 \times 5 = 25$
- $6 \times 6 = 36$
- $7 \times 7 = 49$
- $8 \times 8 = 64$
- $9 \times 9 = 81$



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



Действия с натуральными числами



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



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

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

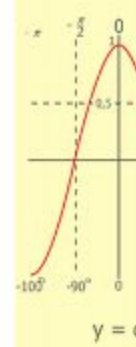
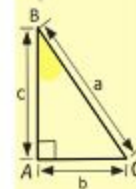
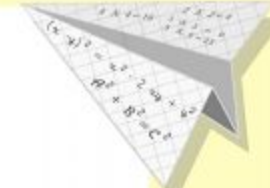
$\sin 90^\circ = 1$



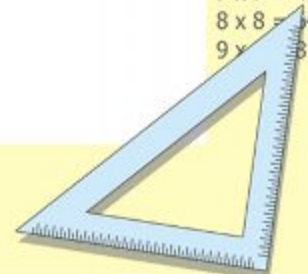
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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

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



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



Порядок выполнения действий

Задание №5

Назовите порядок действий и устно

вычислите:

$$5 \cdot 3 + 8 = ?$$

$$12 \cdot 3 - 2 \cdot 9 = ?$$

$$56 - (20 + 19) = ?$$

$$35 \cdot 2 : 7 = ?$$

$$18 - 32 : 2 = ?$$

$$12 : 4 + 23 \cdot 4 = ?$$

$$(64 - 39) + (48 + 13) = ?$$

$$8 \cdot (17 - 15) = ?$$

$$1\ 260 - 120 : 2 = ?$$

$$(5\ 003 - 7) \cdot (300 - 300) = ?$$

$$(500 - 100 + 200) : (301 - 300) = ?$$

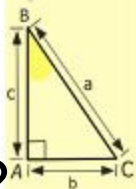
$$20 \cdot 10 : 2 = ?$$

$$245 + 35 \cdot 18 = ?$$

$$10\ 260 : 36 + 64 = ?$$

$$(87 + 35) \cdot 25 = ?$$

$$52\ 998 \cdot (37 + 29) = ?$$



- 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

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

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

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

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

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

$$x = 70$$

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

Сравнение натуральных чисел



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



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

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

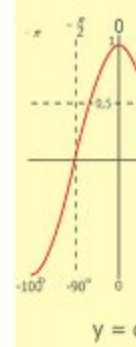
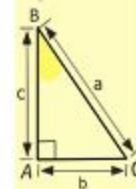
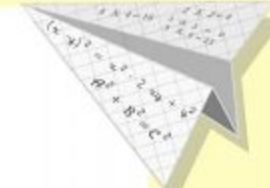
$$\sin 90^\circ = 1$$



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

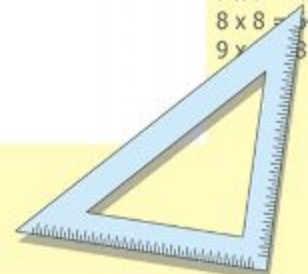
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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



y = cos

- 2 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



	<	
54		55
	>	
86		76
	<	
145		195
	<	
285		358
	>	
999		998
	<	
1002		1005
	>	
12 544		12 534
	<	
20 011 125		20 100 052
	>	
2 374		2 365
	>	
65 934		62 156

Сравнение обыкновенных дробей

Сравните дроби:

$$\frac{16}{16} > 1$$

$$\frac{6}{5} > \frac{6}{7}$$

$$\frac{15}{12} = \frac{12}{12}$$

$$\frac{63}{3} > \frac{40}{8}$$

$$1 < \frac{4}{3}$$

$$\frac{3}{12} < \frac{4}{12}$$

$$\frac{31}{60} > \frac{29}{60}$$

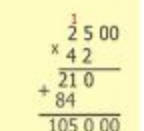
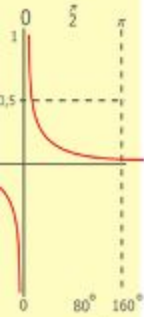
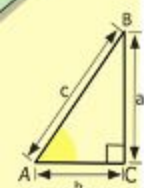
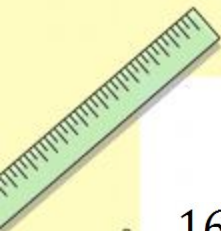
$$\frac{1}{2} < \frac{5}{6}$$

$$\frac{5}{8} < \frac{7}{8}$$

$$\frac{7}{9} < 1$$

$$\frac{12}{12} = \frac{21}{21}$$

$$\frac{2}{1} > \frac{34}{18}$$



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

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

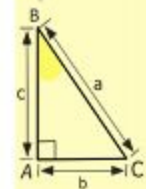
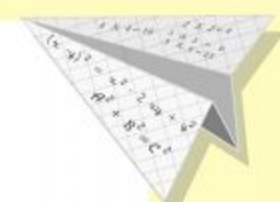
$$\sin 90^\circ = 1$$



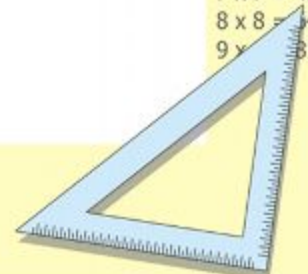
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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

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

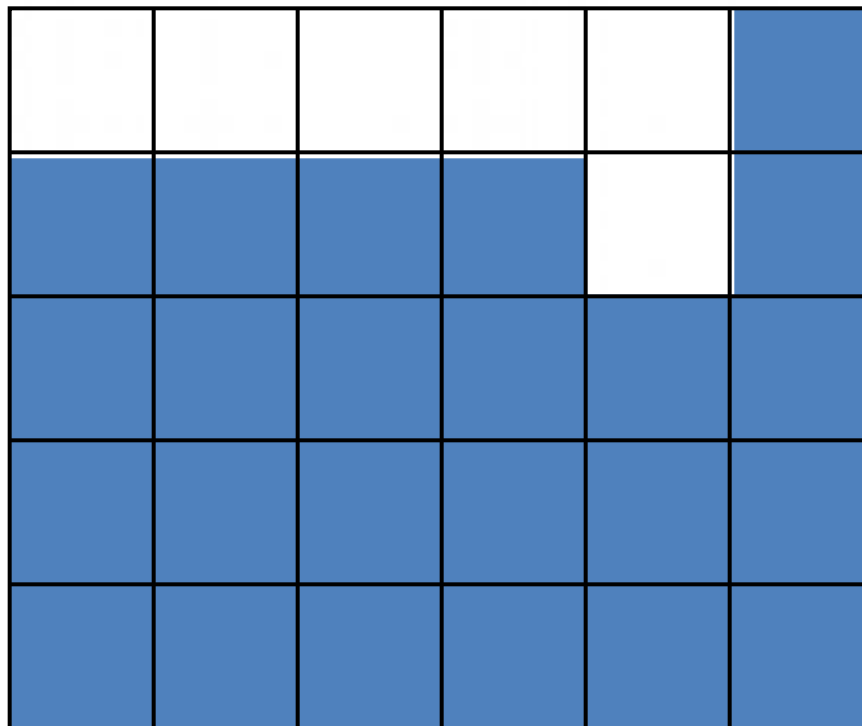


- 2 x 2 = 4
- 3 x 3 = 9
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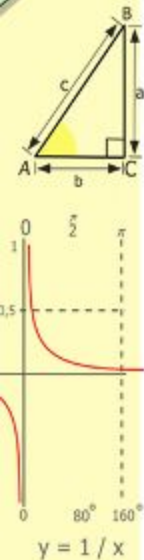


Доли. Обыкновенные дроби

Какая часть фигуры закрашена?



$\frac{16}{36}$ $\frac{16}{36}$
 $\frac{4}{9}$ $\frac{4}{9}$



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

$2 \times 2 = 4$
 $3 \times 3 = 9$
 $4 \times 4 = 16$
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 $8 \times 8 = 64$
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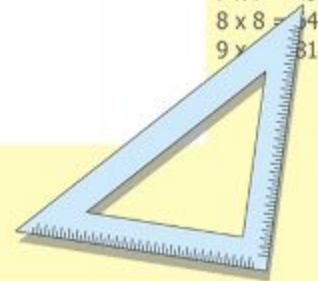
$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$
 $\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$

$\sin 90^\circ = 1$

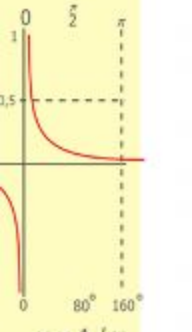
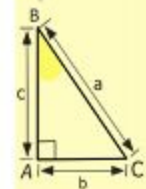
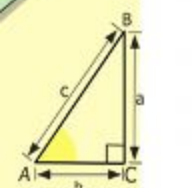
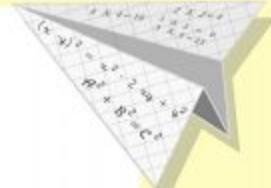
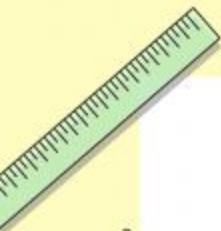
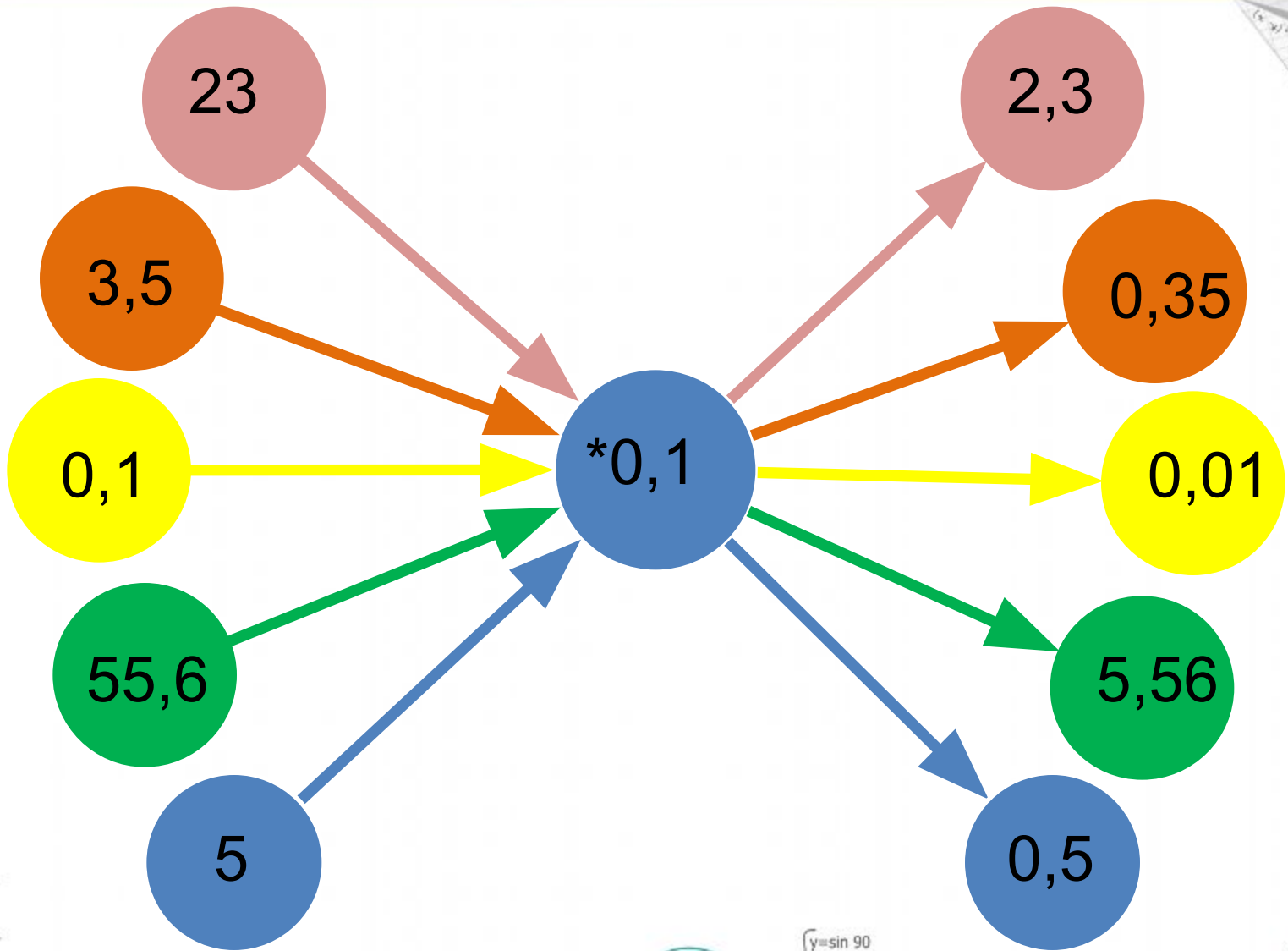


$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$
 $\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$

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



Умножение десятичных дробей



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

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

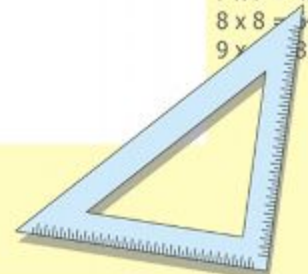
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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

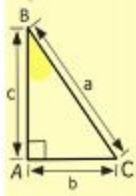
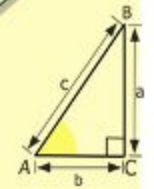
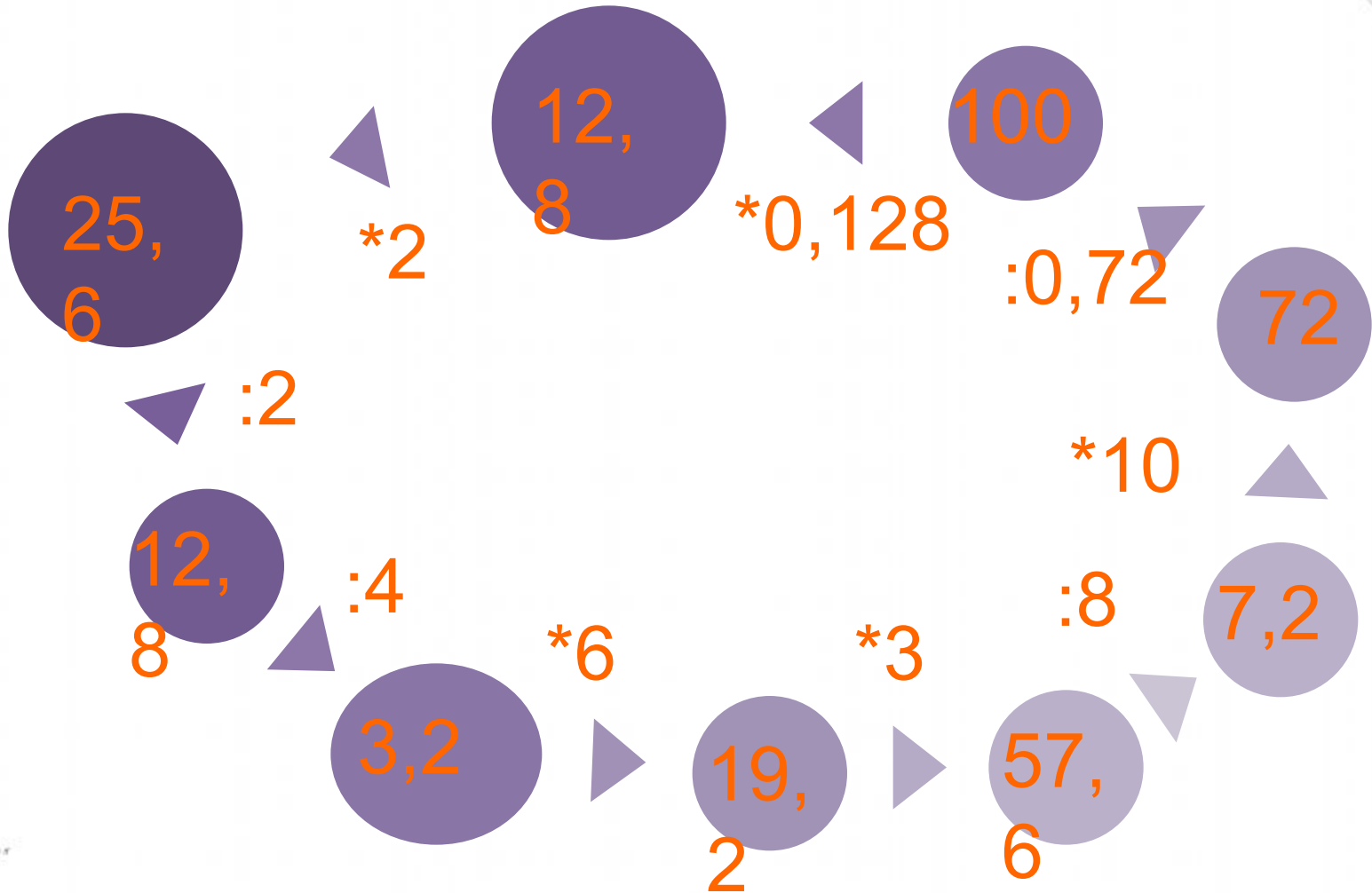


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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



Умножение и деление десятичных дробей на натуральные числа



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

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



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

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

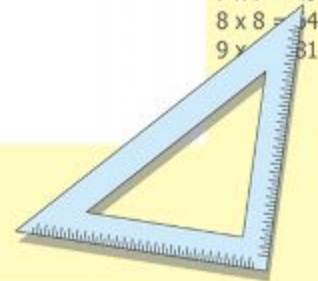
$$\sin 90^\circ = 1$$



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

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

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



Решение уравнений

$$x - 23 = 12$$

$$x = 35$$

$$4 * x = 8$$

$$x = 2$$

$$3y + 5y = 16$$

$$y = 2$$

$$110 + x = 139$$

$$x = 39$$

$$x^2 - 4 = 32$$

$$x = -6, x = 6$$

$$24y - 20 = 4$$

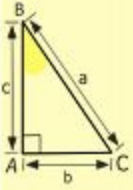
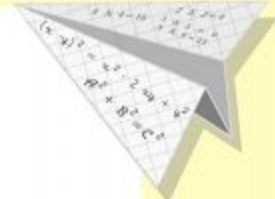
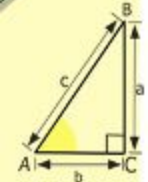
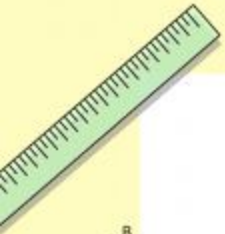
$$y = 1$$

$$44 * x + x = 9$$

$$x = 1/5$$

$$4x^2 + x = 2$$

$$x = 2, x = 1$$



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

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



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

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

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

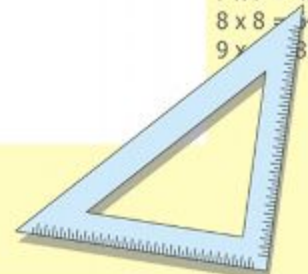


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

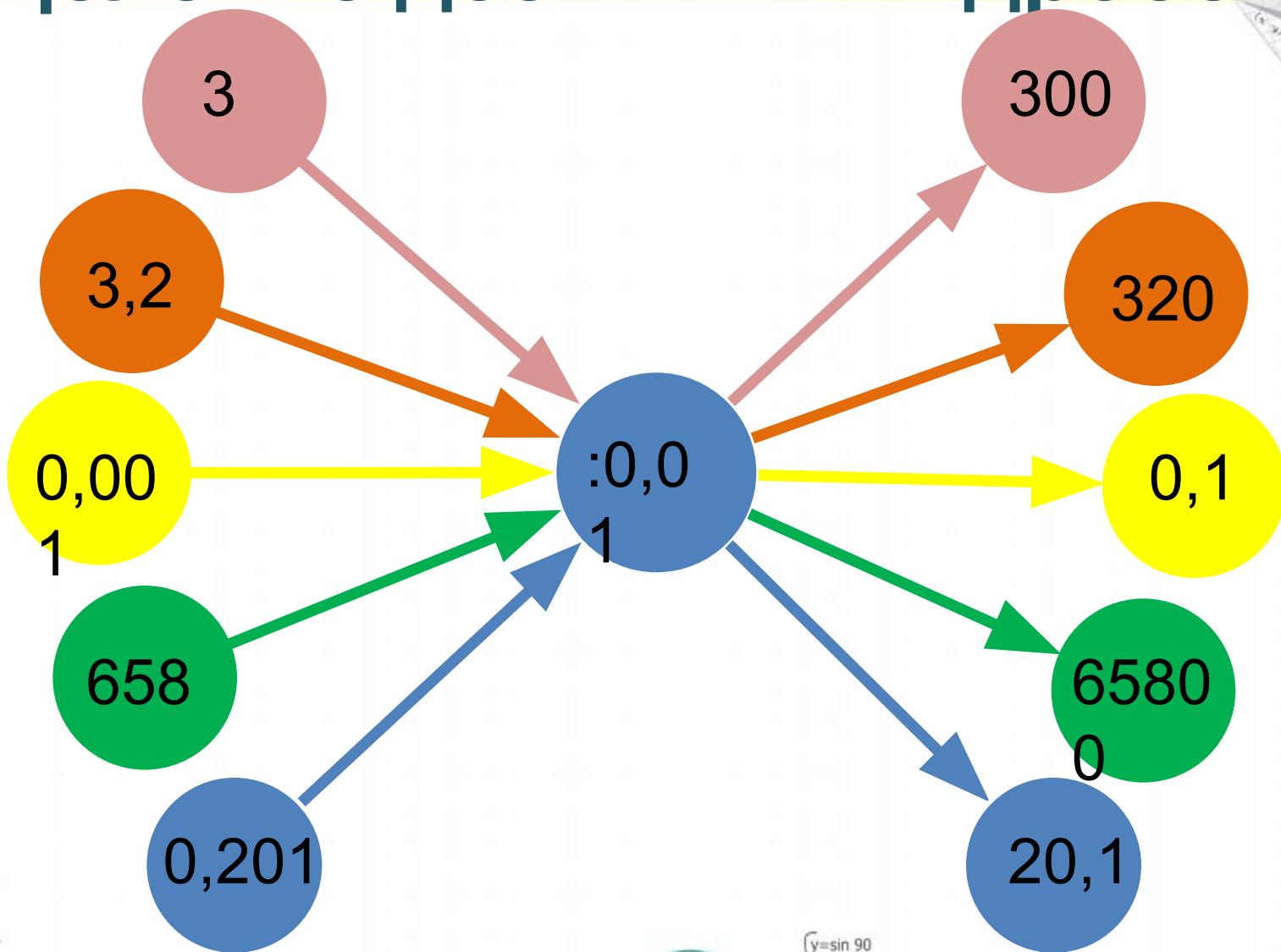
$$\begin{cases} y = 1 \\ x = 25 + 45 \end{cases}$$

$$x = 70$$

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



Деление десятичных дробей



A vertical ruler on the left side of the page. Below it are two diagrams: a right-angled triangle with sides labeled a , b , and c , and a graph of the function $y = 1/x$ with the x-axis labeled from 0 to 160° .

On the right side, there is a diagram of a right-angled triangle with sides a , b , and c . Below it is a graph of a sine wave with the x-axis labeled from -100° to 0 . The y-axis is labeled from $-0,5$ to 1 .

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

A yellow pencil at the bottom left. To its right is a graph of a sine wave with the x-axis labeled from 0° to 360° .

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

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

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

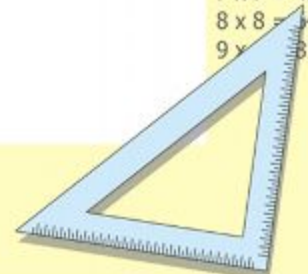


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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

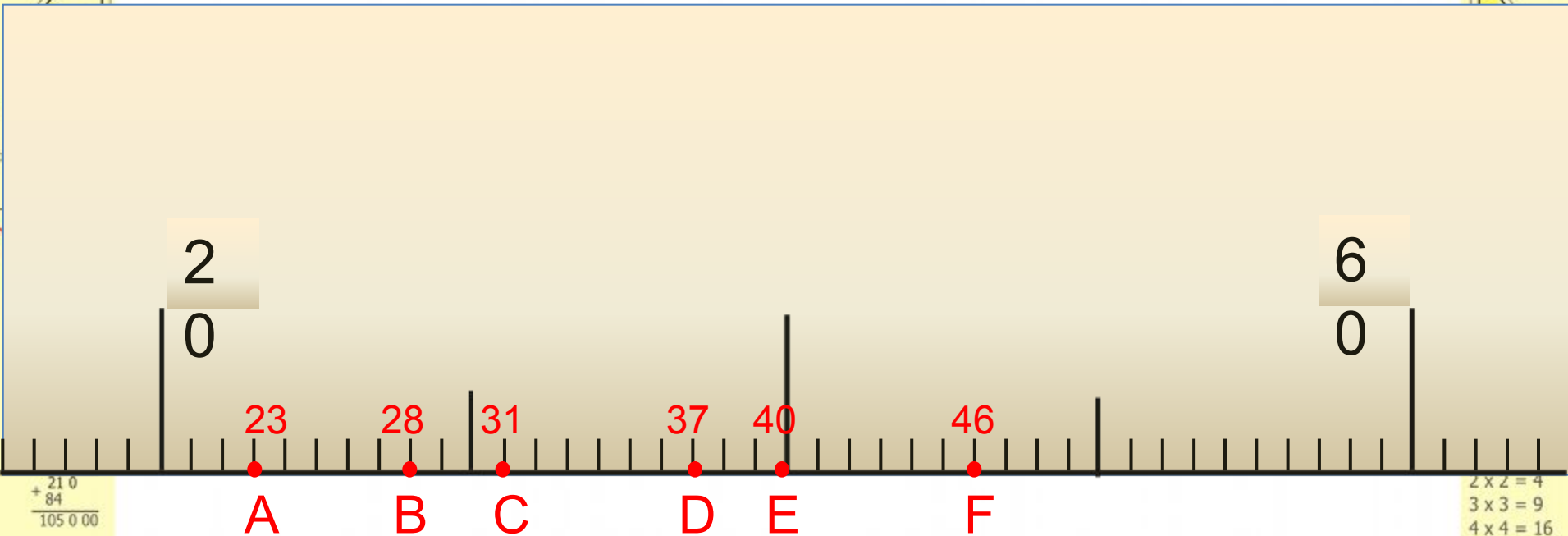
$$\frac{x}{70}$$

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



Шкалы и координаты

Какие числа соответствуют точкам на координатной шкале?



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

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



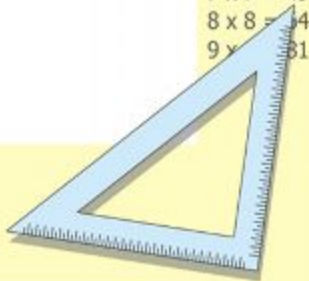
$$\frac{a}{A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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



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

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



Шкалы и координаты

Выразите в сантиметрах:

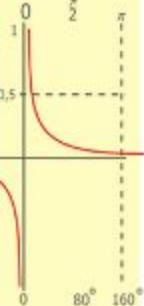
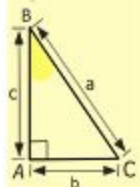
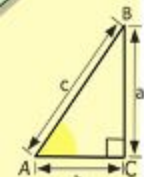
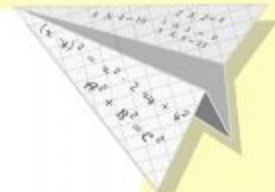
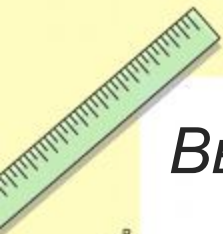
2 м 50 см = 250 см; 2 м 5 см = 205 см;

4 дм 8 см = 48 см; 460 мм = 46 см;

Выразите в метрах:

1 км 600 м = 1600 м; 4 км 30 м = 4030 м;

7 км 5 м = 7005 м; 3850 дм = 385 м;



$$\begin{array}{r} \frac{1}{2} 500 \\ \times 42 \\ \hline 2100 \\ + 84 \\ \hline 105000 \end{array}$$

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

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

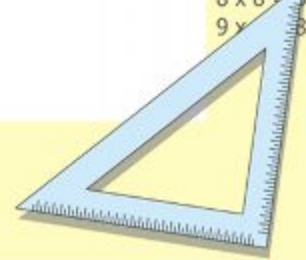
$$\sin 90^\circ = 1$$



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

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

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



Площадь прямоугольника

Вычислите площадь:

4 см

15 см

$S = 60 \text{ см}^2$

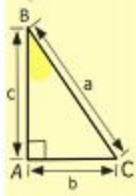
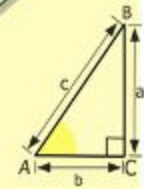
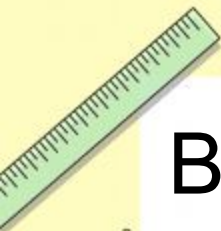
11 см

$S = 121 \text{ см}^2$
?

2 дм

9 см

$S = 180 \text{ см}^2$



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

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



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

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

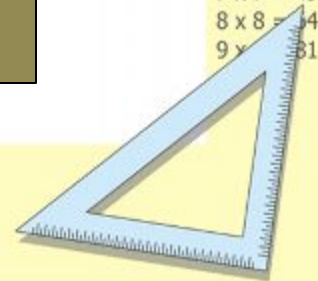
$$\sin 90^\circ = 1$$



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

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

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



Вычислите устно

$20-8$

$153+7$

$24*2$

$2,5-1,6$

$30-9$

$284+6$

$15*3$

$2,6-0,05$

$30-18$

$238+3$

$17*3$

$4,52-1,2$

$40-17$

$327+9$

$18*4$

$4-0,8$

$50-14$

$118+17$

$19*3$

$1-0,45$

$100-6$

$90:90$

$45:9$

$5+0,35$

$200-5$

$80:4$

$64:8$

$3,7+0,24$

$200-10$

$120:1$

$49:7$

$0,46+1,8$

$300-15$

$120*1$

$30:6$

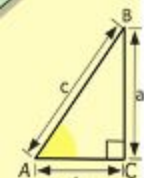
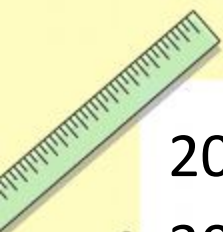
$0,57+3$

$400-29$

$250:5$

$48:8$

$1,64+0,36$



$y = 1/x$

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



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

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

$\sin 90^\circ = 1$

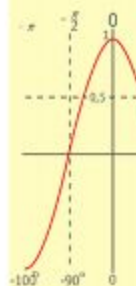
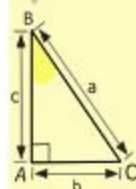
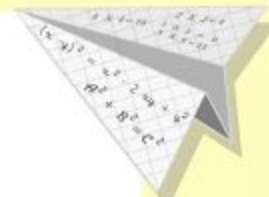


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

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

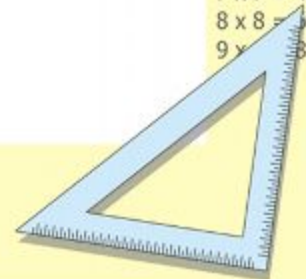
$x = 70$

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



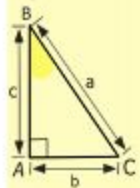
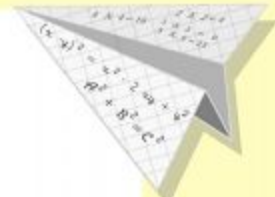
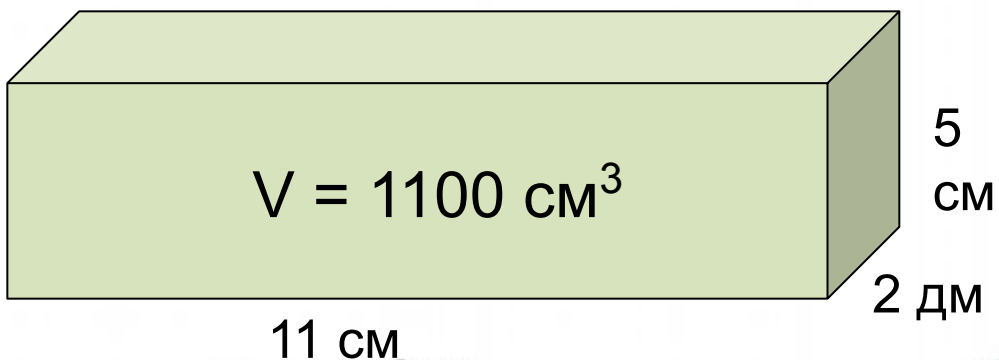
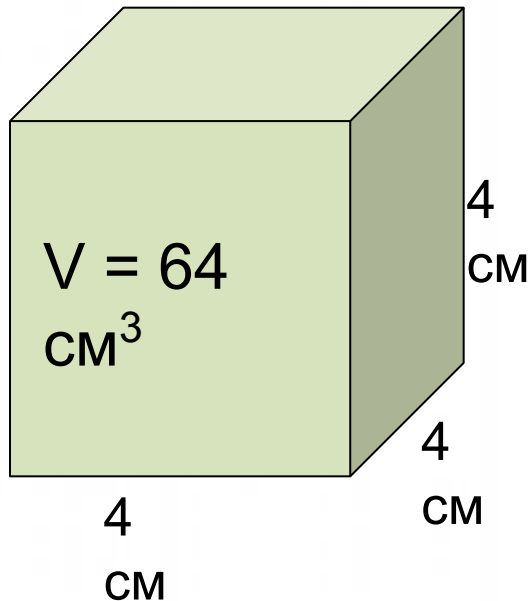
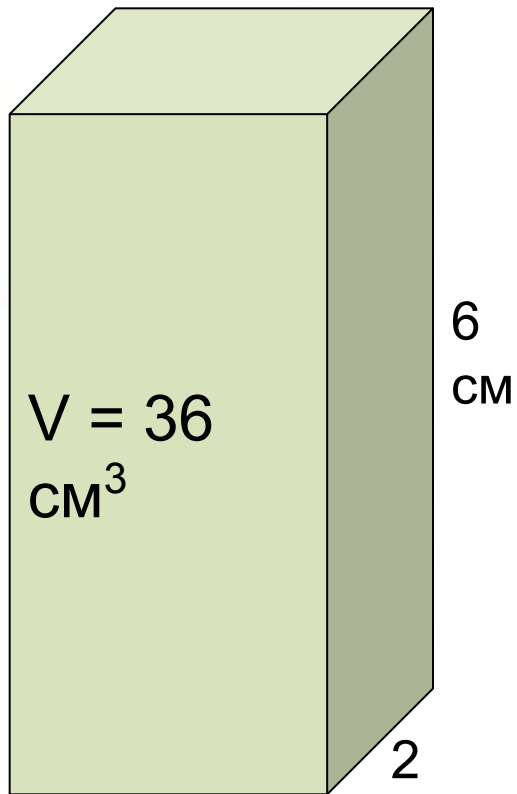
$y = \cos$

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

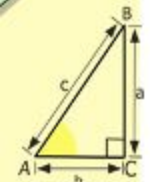


Объем прямоугольного параллелепипеда

Найдите объем фигур:



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



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



3 CM

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

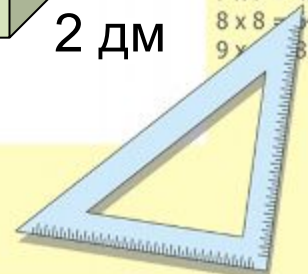
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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



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

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



Проценты

Найдите неизвестное

A 40 B

 CM

A 24 B ?(процент

 CM в)

A 10 B ?(процент

 CM в)

A 32 B ?(процент

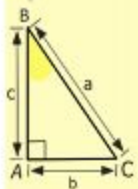
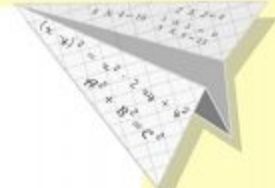
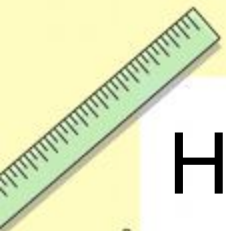
 CM в)

A 28 B ?(процент

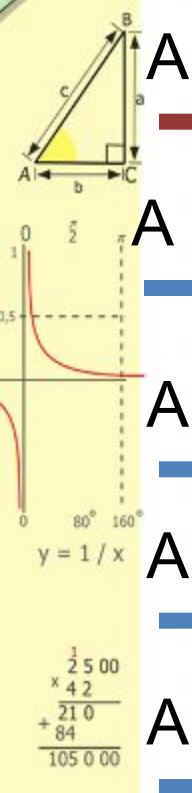
 CM в)

Ответ:

60%, 25%, 80%, 70%

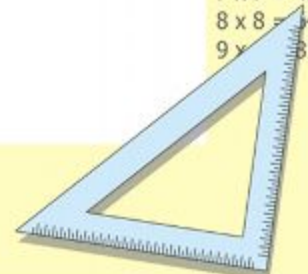


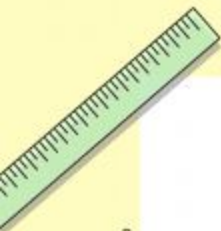
- 2 x 2 = 4
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- 4 x 4 = 16
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- 6 x 6 = 36
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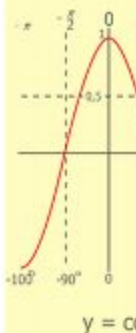
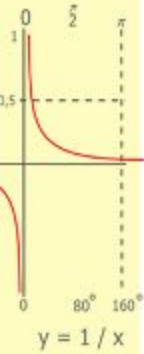
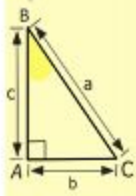
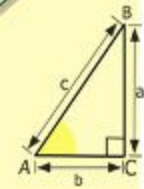
$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \\ y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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





Конец!!!



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

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

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

