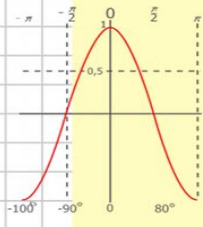
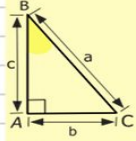
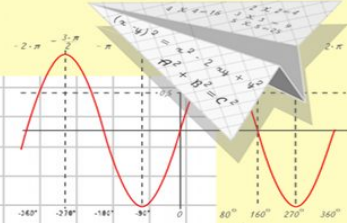


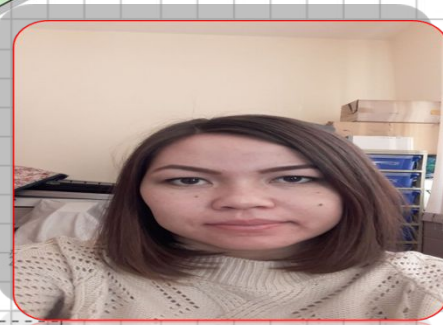
Математик

а

Хайдарова Асель Сафиуллаевна



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



Еңбек өтілі:

10 жыл

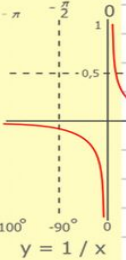
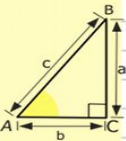
Санаты:

педагог модератор

Мамандығы:

математика пәні мұғалімі

Әдістемелік тақырыбы: «*Математика сабағында жаңа технологиямен АКТ-ны қолдана отырып оқушылардың пәнге деген қызығушылығын ояту*»



$$\begin{array}{r} 12500 \\ \times 42 \\ \hline 210 \\ 84 \\ \hline 105000 \end{array}$$



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

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

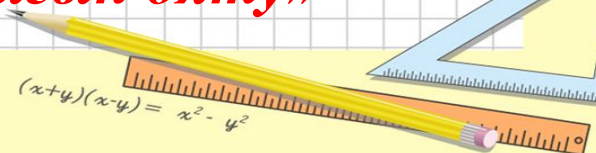


$$\sin 90^\circ = 1$$



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

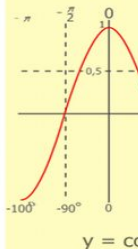
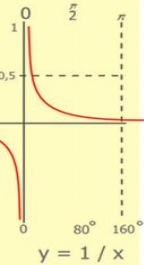
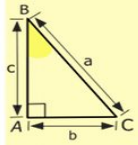
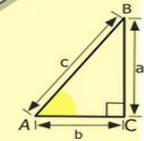
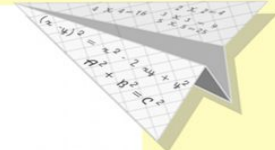
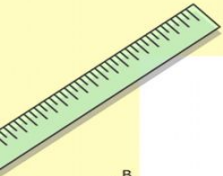
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$



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

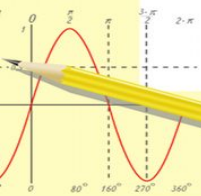
САБАҚТЫҢ ТАҚЫРЫБЫ:

Құрамында квадрат түбірлері бар өрнектерді түрлендіру



$$\begin{array}{r} 1\ 5\ 00 \\ \times 4\ 2 \\ + 21\ 0 \\ \hline 105\ 0\ 00 \end{array}$$

- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
- 5 x 5 = 25
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- 8 x 8 = 64
- 9 x 9 = 81



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

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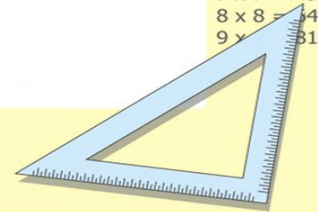
$$\sin 90^\circ = 1$$

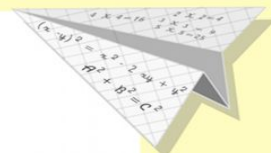
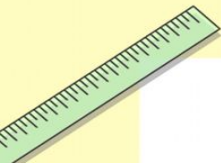


$$\begin{cases} y = \sin 90 \\ x = 25y + 45 \end{cases}$$

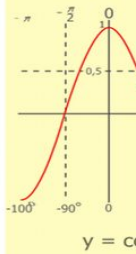
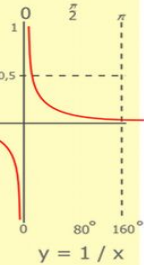
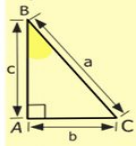
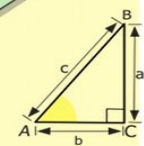
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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



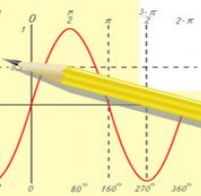


Үй ЖҰМЫСЫ



$$\begin{array}{r} 1\ 2\ 5\ 00 \\ \times\ 4\ 2 \\ +\ 21\ 0 \\ \hline 105\ 0\ 00 \end{array}$$

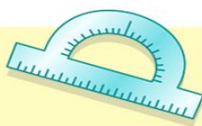
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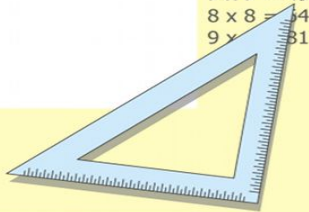
$$\sin 90^\circ = 1$$



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

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



«Мизга шабуыл»

1. Квадрат түбір белгісінің басқаша атауы қандай?

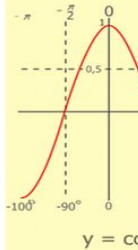
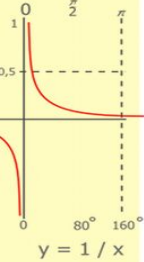
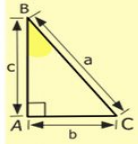
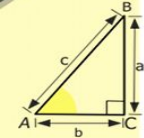
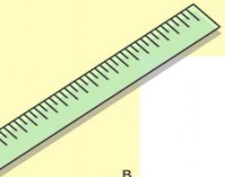
2. Саннан квадрат түбір алу үшін бұл сан қандай болуы керек?

3. Теріс санның квадраты қандай сан?

4. Арифметикалық квадрат түбір дегеніміз не?

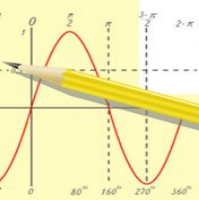
5. Оң санның неше квадрат түбірі бар?

6. Арифметикалық квадрат түбірдің қасиеттерін ата.



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

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



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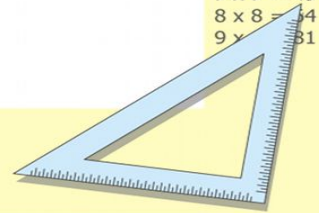
$$\sin 90^\circ = 1$$



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

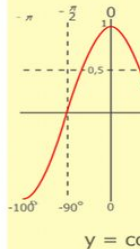
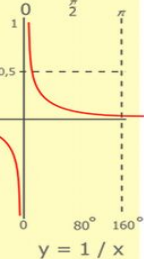
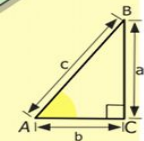
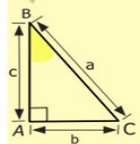
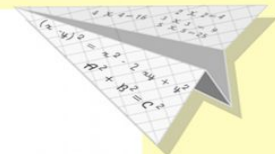
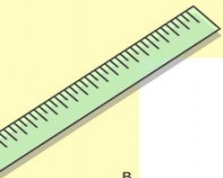
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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



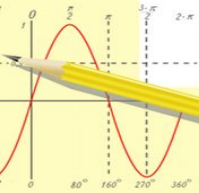
САБАҚТЫҢ МАҚСАТЫ:

Оқушылардың тақырып бойынша алған білімдерін тереңдетіп, жинақтау, жүйелі қолдана білуге үйрету.



$$\begin{array}{r} 1\ 5\ 00 \\ \times 4\ 2 \\ + 21\ 0 \\ \hline 105\ 0\ 00 \end{array}$$

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



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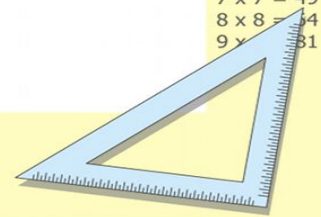
$$\sin 90^\circ = 1$$

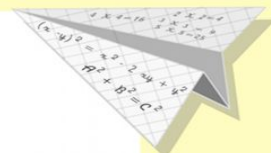
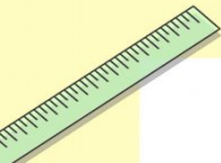


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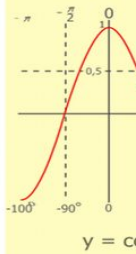
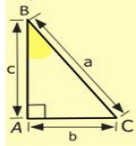
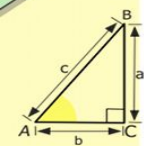
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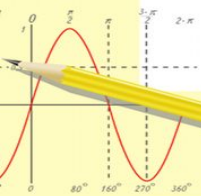


Конверттегі тапсырма



$$\begin{array}{r} 12500 \\ \times 42 \\ + 210 \\ \hline 105000 \end{array}$$

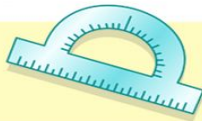
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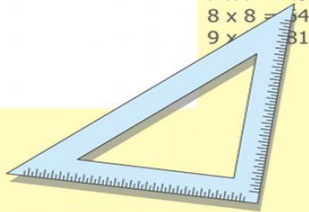
$$\sin 90^\circ = 1$$



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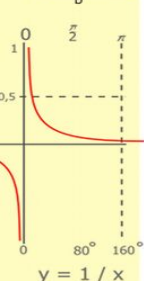
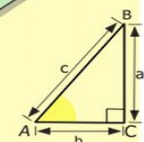
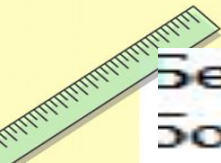
Бөлшектің бөлімін иррационалдықтан босат.

1) $\frac{3x}{7\sqrt{x}}$ 2) $\frac{10}{3\sqrt{5}}$ 3) $\frac{15}{2\sqrt{6}}$ 4) $\frac{x}{\sqrt{y}}$

5) $\frac{2}{2-\sqrt{3}}$ 6) $\frac{2}{2+\sqrt{3}}$ 7) $\frac{11}{2\sqrt{3}+1}$

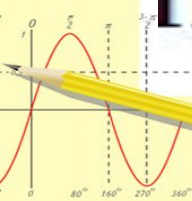
8) $\frac{19}{2\sqrt{5}-1}$ 9) $\frac{1}{2\sqrt{5}-\sqrt{7}}$ 10) $\frac{4}{\sqrt{10}+\sqrt{2}}$

11) $\frac{2}{\sqrt{y}+\sqrt{x}}$ 12) $\frac{x-y}{\sqrt{x+y}}$ 13) $\frac{x}{\sqrt{x-1}}$



$y = 1/x$

$$\begin{array}{r} 1\ 5\ 00 \\ \times 4\ 2 \\ \hline 21\ 0 \\ + 84 \\ \hline 105\ 0\ 00 \end{array}$$



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

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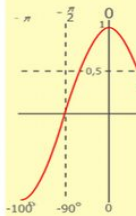
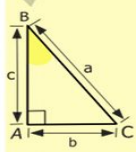
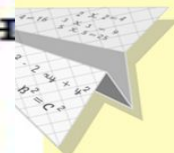
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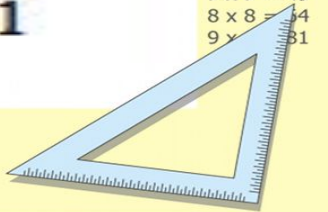
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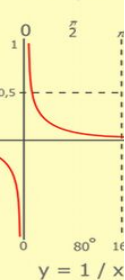
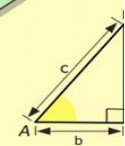
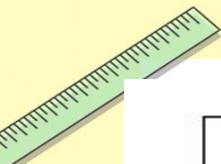


$y = \cos$

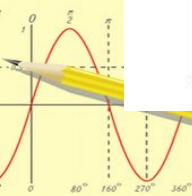
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- 9 x 9 = 81



$\frac{2(\sqrt{y}-\sqrt{x})}{y-x}$	АЙЫНДА БІР	$2(2-\sqrt{3})$	КЕЛСЕ
$\frac{3\sqrt{x}}{7}$	ЕГЕРДЕ	$\frac{\sqrt{10}-\sqrt{2}}{2}$	ЕҢ БОЛМАСА
$2\sqrt{3}-1$	КҮНІНДЕ	$\frac{x\sqrt{y}}{y}$	ҚАТАРЫНДА
$\frac{2\sqrt{5}}{3}$	ЕСТІ	$\frac{2\sqrt{5}+\sqrt{7}}{13}$	ЖҰМАСЫНДА БІР
$2(2+\sqrt{3})$	БОЛҒЫЦ	$\frac{x(\sqrt{x-1})}{x-1}$	ЕСЕП АЛ
$\frac{(x-y)(\sqrt{x+y})}{x+y}$	ӨЗІҢНЕН-ӨЗІҢ	$\frac{5\sqrt{6}}{4}$	КІСІЛЕРДІҢ
$2\sqrt{5}+1$	БІР МӘРТЕБЕ		



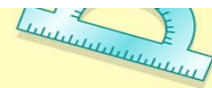
$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 210 \\ + 84 \\ \hline 10500 \end{array}$$



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

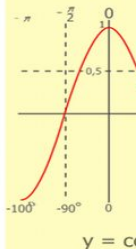
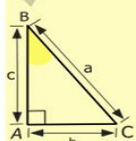
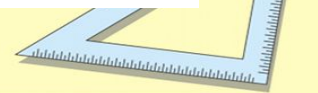
$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

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



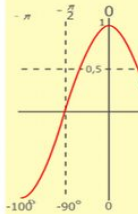
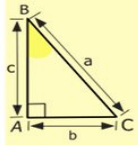
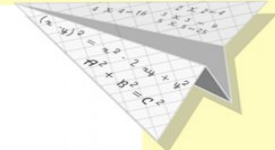
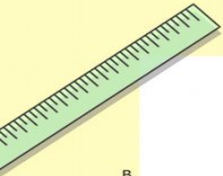
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ x = 70 \end{cases}$$

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



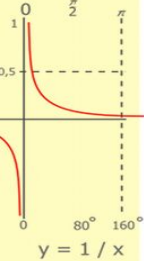
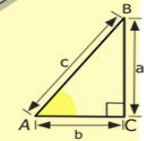
- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
- 5 x 5 = 25
- 6 x 6 = 36
- 7 x 7 = 49
- 8 x 8 = 64
- 9 x 9 = 81

*Егерде есті кісілердің қатарында
болғың келсе күніне бір мәрте,
жұмасында бір, ең болмаса
айында бір өзіңнен өзің есеп ал*

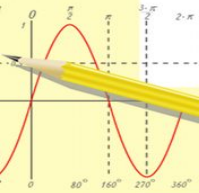


$y = \cos$

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



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



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

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

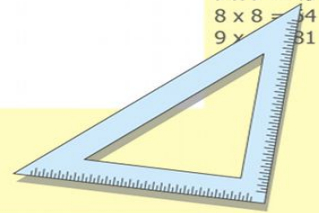
$$\sin 90^\circ = 1$$



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

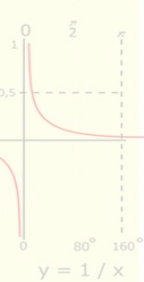
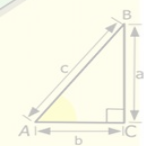
$$\begin{cases} y = 1 \\ x = 25 + 45 \\ \hline x = 70 \end{cases}$$

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

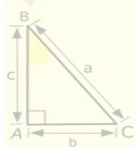
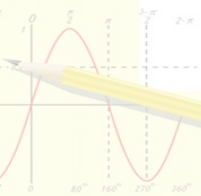


Сәйкестендіру кестесі

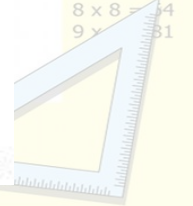
$\frac{\sqrt{3} * \sqrt{15}}{9}$	$\frac{\sqrt{3}}{2}$
$\frac{\sqrt{5} * \sqrt{12}}{2\sqrt{20}}$	$\frac{\sqrt{2}}{2}$
$\frac{3\sqrt{6} * \sqrt{10}}{\sqrt{15}}$	200
$\sqrt{2^6 * 5^4}$	$\frac{1}{3}$
$\frac{18}{\sqrt{3^4} * \sqrt{2^8}}$	$\frac{1}{8}$
$\frac{6\sqrt{3} * 3\sqrt{6}}{\sqrt{3^6}}$	6
$\frac{\sqrt{2} + \sqrt{2} + \sqrt{2}}{\sqrt{2} * \sqrt{2} * \sqrt{2}}$	$\frac{\sqrt{5}}{3}$
$\frac{\sqrt{14}}{\sqrt{6} * \sqrt{21}}$	$\frac{3}{2}$

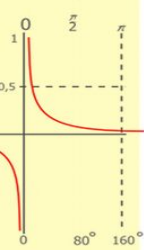
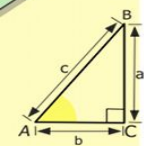
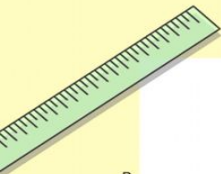


$$\begin{array}{r} 2500 \\ \times 42 \\ \hline 2100 \\ + 840 \\ \hline 105000 \end{array}$$



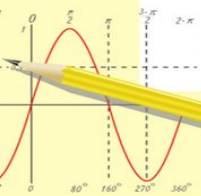
- 2 x 2 = 4
- 3 x 3 = 9
- 4 x 4 = 16
- 5 x 5 = 25
- 6 x 6 = 36
- 7 x 7 = 49
- 8 x 8 = 64
- 9 x 9 = 81



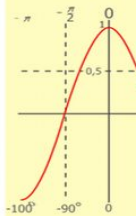
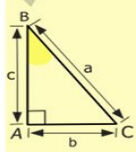
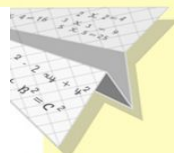


$y = 1/x$

$$\begin{array}{r} 1\ 5\ 00 \\ \times 4\ 2 \\ + 21\ 0 \\ \hline 105\ 000 \end{array}$$

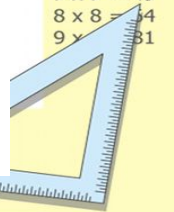


$\frac{\sqrt{14}}{\sqrt{6} * \sqrt{21}}$	$\frac{3}{2}$
$\frac{\sqrt{3} * \sqrt{15}}{9}$	$\frac{\sqrt{3}}{2}$
$\frac{\sqrt{5} * \sqrt{12}}{2\sqrt{20}}$	$2\sqrt{2}$
$\frac{3\sqrt{6} * \sqrt{10}}{\sqrt{15}}$	200
$\sqrt{2^6 * 5^4}$	$\frac{1}{3}$
$\frac{18}{\sqrt{3^4} * \sqrt{2^8}}$	$\frac{1}{8}$
$\frac{6\sqrt{3} * 3\sqrt{6}}{\sqrt{3^6}}$	6
$\frac{\sqrt{2} + \sqrt{2} + \sqrt{2}}{\sqrt{2} * \sqrt{2} * \sqrt{2}}$	$\frac{\sqrt{5}}{3}$

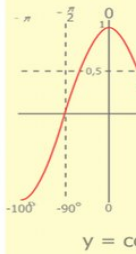
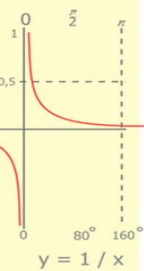
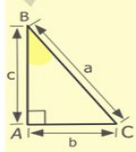
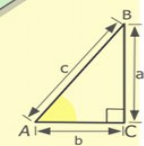
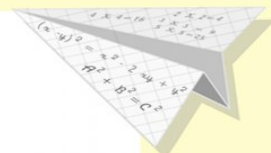
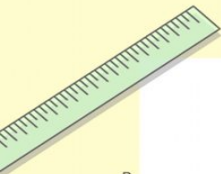


$y = \cos$

- 2 x 2 = 4
- 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

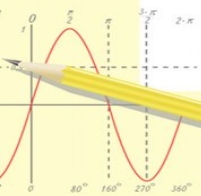


ЖЕКЕ ЖҰМЫС QR КОД ТАПСЫРМАСЫ



$$\begin{array}{r} 12500 \\ \times 42 \\ + 210 \\ \hline 105000 \end{array}$$

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

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

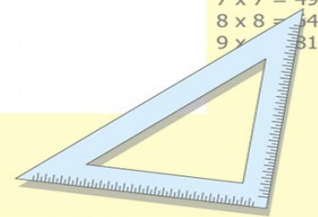
$$\sin 90^\circ = 1$$



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

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

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



Жауабын тексер



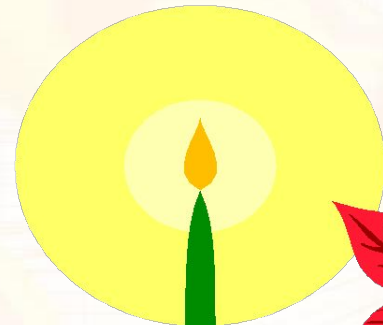
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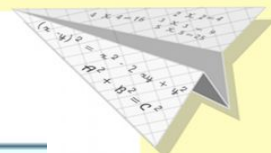
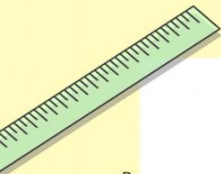
2. B

3. B

4. C

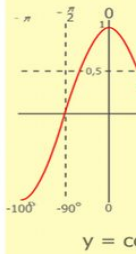
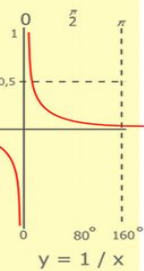
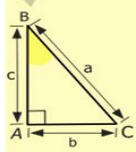
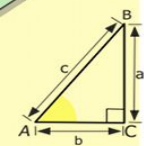
5. B





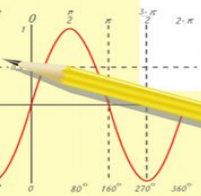
“Сөйлемді аяқта”

Бүгін сабақта ... білдім
 қиындық тудырды
 ерекше болды
 Енді ... жасай аламын
 ... бұл маған пайдалы болады



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

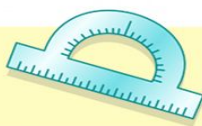
- 2 x 2 = 4
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$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

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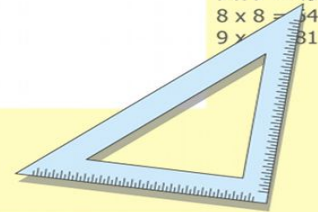
$$\sin 90^\circ = 1$$



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

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

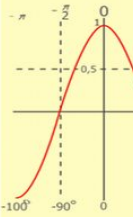
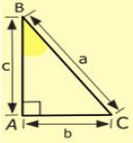
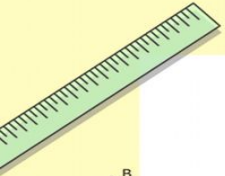
$$(x+y)(x-y) = x^2 - y^2$$



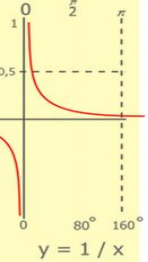
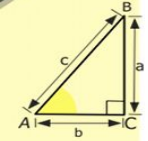
Үй жұмысы

№4.23 ,4.24

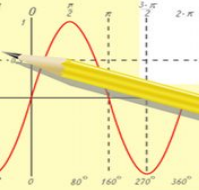
1 2 3 4 5



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



$$\begin{array}{r} 1\ 5\ 00 \\ \times 4\ 2 \\ + 21\ 0 \\ \hline 105\ 0\ 00 \end{array}$$



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

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