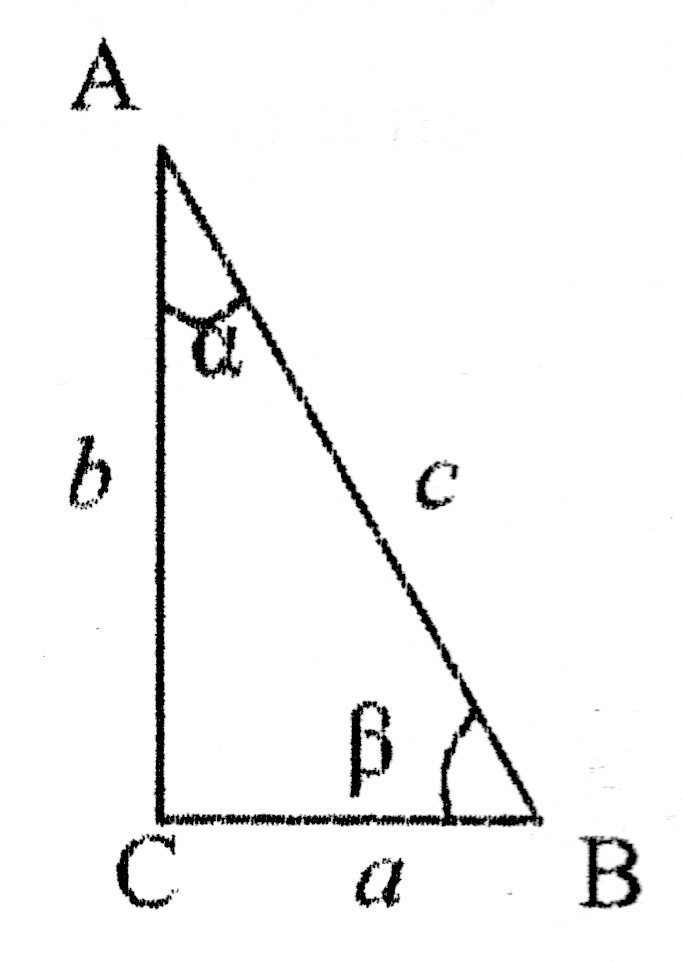
ЧАСТЬ I

1. Формула перехода от радианной меры к градусной:\_\_\_\_\_\_\_\_\_\_\_\_

2. Формула перехода от градусной меры к радианной:\_\_\_\_\_\_\_\_\_\_\_\_

1 рад ≈ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

3. Синус острого угла α прямоугольного

треугольника – это отношение \_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

sin α = \_\_\_\_\_\_\_\_\_\_\_\_\_ sin β = \_\_\_\_\_\_\_\_\_\_\_\_\_

4. Косинус острого угла α прямоугольного

треугольника – это отношение\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

соs α = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ cos β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_

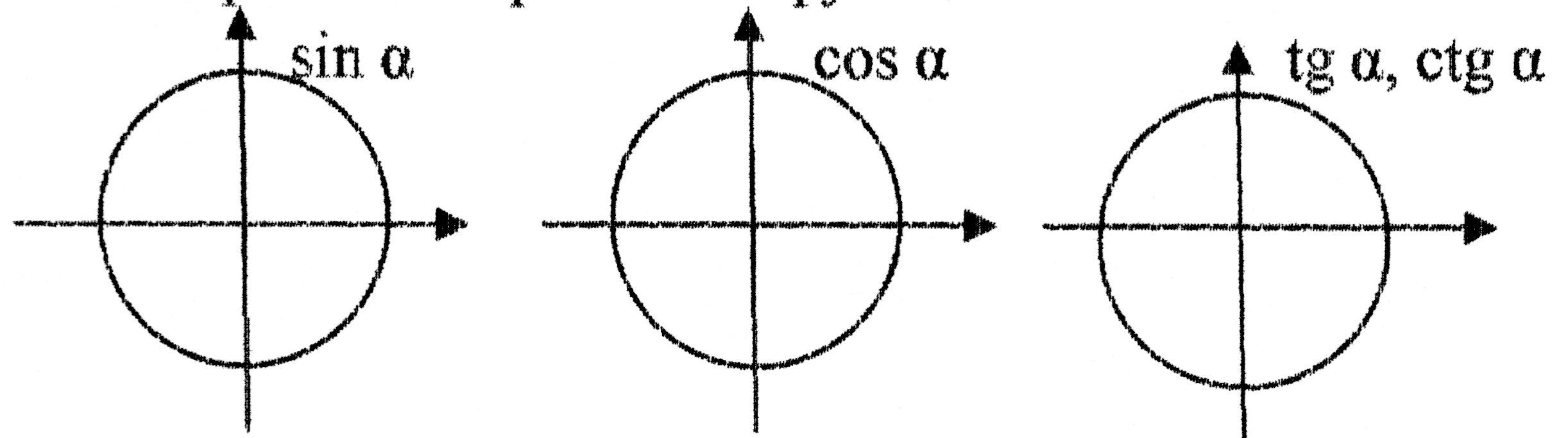
5.Тангенс острого угла α прямоугольного треугольника – это отношение \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

tg α = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ tg β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. Котангенс острого угла α прямоугольного треугольника – это отношение\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ctg α = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ctg β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. Знаки тригонометрических функций.



8. Чётность, нечётность

cos (– α) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ tg (– α) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

sin (– α) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ctg (– α) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Периодичность.

Т (sin *x*) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Т (tg *х*) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

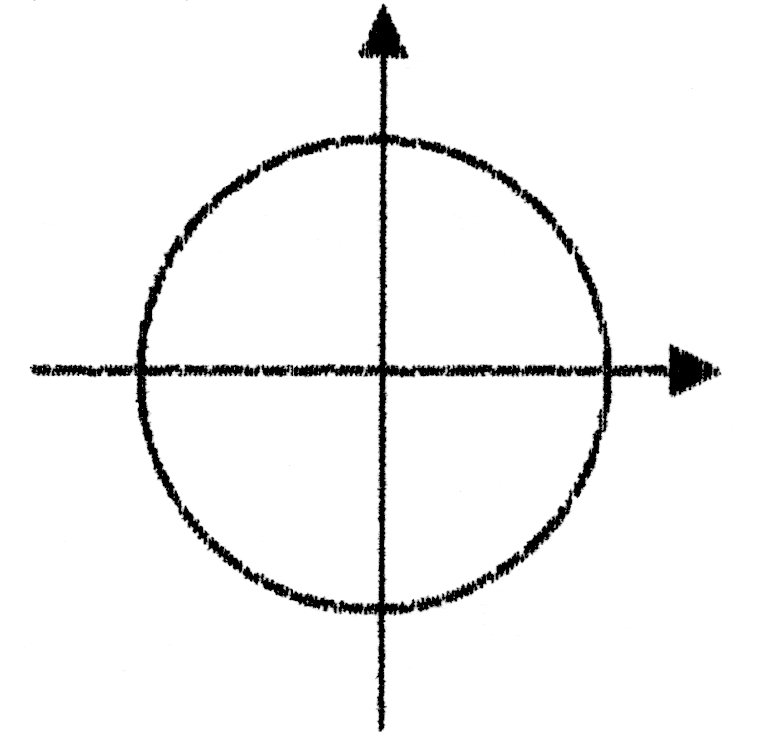
Т (cos *х*) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Т (ctg *х*) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. Период для функции *у* = A*f*(*kх* + *b*) равен T′ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ЧАСТЬ II

1. Синус угла α – это \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ точки Ра (*х*; *у*) единичной

окружности.

2. Косинус утла α – это \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ точки Ра(*х*; *у*) единичной

окружности.

3. Нарисуйте линии тангенсов и котангенсов.

Тангенс угла α – это\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

соответствующей точки на линии тангенсов.

Котангенс угла α – это \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

соответствующей точки на линии котангенсов.

4.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0° | 30° | 45° | 60° | 90° | 180°  π | 270° | 360°  2π |
| sin α |  |  |  |  |  |  |  |  |
| соs α |  |  |  |  |  |  |  |  |
| tg α |  |  |  |  |  |  |  |  |
| ctg α |  |  |  |  |  |  |  |  |

5. Основные тригонометрические тождества.

ЧАСТЬ III

1. Формулы сложения.

sin (α + β) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

cos (α + β) =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

sin (α – β) =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

cos (α – β) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

tg (α + β) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ tg (α – β) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

сtg ( α + β) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ctg ( α – β) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Формулы двойного аргумента.

sin 2α\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

cos 2α \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_

tg 2α \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ctg 2α \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Формулы понижения степени.

sin2α \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cos2α \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Формулы половинного аргумента.

sin = ± cos = ±

tg = ± = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ctg = ± = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Формулы приведения.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *х* | π + α | π – α | 2π + α | 2π – α | + α | – α | + α | – α |
| sin *x* |  |  |  |  |  |  |  |  |
| cos *х* |  |  |  |  |  |  |  |  |
| tg *х* |  |  |  |  |  |  |  |  |
| ctg *х* |  |  |  |  |  |  |  |  |

6. Формулы преобразования суммы и разности тригонометрических

функций в произведение.

sin α + sin β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

sin α – sin β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

cos α + cos β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

cos α – cos β =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

tg α + tg β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

tg α – tg β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ctg α + ctg β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ctg α – ctg β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. Формулы преобразования произведения тригонометрических функций в сумму.

sin α sin β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

cos α cos β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

sin α cos β = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_