

### **Индивидуальное задание.**

Построить на одном графике правильный треугольник, шестиугольник и восьмиугольник с радиусом описанной окружности  $R$ , центром в точке  $O$ .

Повернуть треугольник на  $\alpha$  градусов, изобразить старый и новый треугольники на одном графике.

Найти пересечение правильного шестиугольника и его копии, повернутой на угол  $\beta$  градусов.

Вариант N 1

$$R = 2, \alpha = 90, \beta = 45, O(-12, 6).$$

Вариант N 2

$$R = 5, \alpha = 30, \beta = 150, O(12, 2).$$

Вариант N 3

$$R = 7, \alpha = -135, \beta = 165, O(-11, 7).$$

Вариант N 4

$$R = 3, \alpha = 135, \beta = 90, O(-9, 2).$$

Вариант N 5

$$R = 6, \alpha = 90, \beta = 120, O(12, 10).$$

Вариант N 6

$$R = 3, \alpha = -120, \beta = 105, O(6, 9).$$

Вариант N 7

$$R = 12, \alpha = -90, \beta = 135, O(9, -2).$$

Вариант N 8

$$R = 9, \alpha = -120, \beta = 15, O(8, 8).$$

Вариант N 9

$$R = 11, \alpha = 135, \beta = 90, O(10, -3).$$

Вариант N 10

$$R = 7, \alpha = -60, \beta = 75, O(8, 12).$$

Вариант N 11

$$R = 10, \alpha = -90, \beta = 45, O(8, -11).$$

Вариант N 12

$$R = 7, \alpha = 60, \beta = 15, O(5, -12).$$

Вариант N 13

$$R = 3, \alpha = 90, \beta = 45, O(4, 6).$$

Вариант N 14

$$R = 2, \alpha = -90, \beta = 135, O(-2, -3).$$

Вариант N 15

$$R = 12, \alpha = 90, \beta = 45, O(-11, 9).$$

Вариант N 16

$$R = 3, \alpha = -60, \beta = 75, O(5, -9).$$

Вариант N 17

$R = 12, \alpha = 90, \beta = 135, O(6, -10)$ .

Вариант N 18

$R = 7, \alpha = 120, \beta = 30, O(2, -10)$ .

Вариант N 19

$R = 7, \alpha = -45, \beta = 105, O(9, -3)$ .

Вариант N 20

$R = 5, \alpha = 45, \beta = 165, O(3, -4)$ .

Вариант N 21

$R = 2, \alpha = 135, \beta = 75, O(8, 6)$ .

Вариант N 22

$R = 12, \alpha = 90, \beta = 135, O(3, 6)$ .

Вариант N 23

$R = 12, \alpha = 30, \beta = 165, O(-7, -6)$ .

Вариант N 24

$R = 5, \alpha = -120, \beta = 15, O(4, 11)$ .

Вариант N 25

$R = 9, \alpha = 45, \beta = 165, O(7, -3)$ .

Вариант N 26

$R = 10, \alpha = -135, \beta = 90, O(2, -4)$ .

Вариант N 27

$R = 12, \alpha = 45, \beta = 105, O(4, 4)$ .

Вариант N 28

$R = 3, \alpha = 60, \beta = 15, O(6, -5)$ .

Вариант N 29

$R = 5, \alpha = 90, \beta = 120, O(-2, -10)$ .

Вариант N 30

$R = 7, \alpha = 135, \beta = 75, O(10, 2)$ .

Вариант N 31

$R = 10, \alpha = 120, \beta = 60, O(-4, -5)$ .

Вариант N 32

$R = 8, \alpha = 45, \beta = 90, O(2, -6)$ .

Вариант N 33

$R = 9, \alpha = -45, \beta = 45, O(-9, -12)$ .

Вариант N 34

$R = 12, \alpha = 45, \beta = 105, O(9, -11)$ .

Вариант N 35

$R = 12, \alpha = 45, \beta = 165, O(-4, -4)$ .

Вариант N 36

$R = 7, \alpha = 135, \beta = 45, O(-6, -8)$ .

Вариант N 37

$R = 9, \alpha = -90, \beta = 60, O(11, -2)$ .

Вариант N 38

$R = 2, \alpha = -135, \beta = 90, O(-4, 11)$ .

Вариант N 39

$R = 10, \alpha = -135, \beta = 135, O(-7, 2)$ .

Вариант N 40

$R = 6, \alpha = 135, \beta = 15, O(2, -8)$ .

Вариант N 41

$R = 5, \alpha = 45, \beta = 75, O(9, 8)$ .

Вариант N 42

$R = 8, \alpha = 60, \beta = 150, O(-6, 7)$ .

Вариант N 43

$R = 12, \alpha = -60, \beta = 30, O(8, -5)$ .

Вариант N 44

$R = 6, \alpha = -135, \beta = 90, O(5, -6)$ .

Вариант N 45

$R = 9, \alpha = 30, \beta = 150, O(2, -12)$ .

Вариант N 46

$R = 7, \alpha = -60, \beta = 150, O(-11, -8)$ .

Вариант N 47

$R = 11, \alpha = 135, \beta = 75, O(8, -7)$ .

Вариант N 48

$R = 9, \alpha = 60, \beta = 105, O(8, -11)$ .

Вариант N 49

$R = 9, \alpha = 90, \beta = 45, O(-9, 7)$ .

Вариант N 50

$R = 3, \alpha = -135, \beta = 105, O(6, 3)$ .

Вариант N 51

$R = 2, \alpha = -30, \beta = 15, O(9, 10)$ .

Вариант N 52

$R = 6, \alpha = 60, \beta = 120, O(9, -10)$ .

Вариант N 53

$R = 11, \alpha = 45, \beta = 90, O(-2, -10)$ .

Вариант N 54

$R = 10, \alpha = 60, \beta = 30, O(-2, 3)$ .

Вариант N 55

$R = 12, \alpha = 90, \beta = 45, O(-12, -3)$ .

Вариант N 56

$R = 8, \alpha = 90, \beta = 135, O(-4, 4)$ .

Вариант N 57

$R = 9, \alpha = -135, \beta = 105, O(12, -3)$ .

Вариант N 58

$R = 7, \alpha = -45, \beta = 165, O(5, 4)$ .

Вариант N 59

$R = 11, \alpha = 135, \beta = 45, O(-5, -7)$ .

Вариант N 60

$R = 10, \alpha = 135, \beta = 165, O(-2, 10)$ .

Вариант N 61

$R = 12, \alpha = 120, \beta = 150, O(3, -9)$ .

Вариант N 62

$R = 2, \alpha = 45, \beta = 165, O(4, 11)$ .

Вариант N 63

$R = 8, \alpha = 90, \beta = 45, O(-3, -10)$ .

Вариант N 64

$R = 11, \alpha = 60, \beta = 105, O(4, -4)$ .

Вариант N 65

$R = 8, \alpha = 45, \beta = 165, O(-6, 4)$ .

Вариант N 66

$R = 12, \alpha = 45, \beta = 165, O(11, -10)$ .

Вариант N 67

$R = 5, \alpha = -45, \beta = 90, O(-4, -6)$ .

Вариант N 68

$R = 8, \alpha = 45, \beta = 135, O(-5, 3)$ .

Вариант N 69

$R = 12, \alpha = -45, \beta = 75, O(10, 6)$ .

Вариант N 70

$R = 3, \alpha = -135, \beta = 105, O(-12, -9)$ .

Вариант N 71

$R = 8, \alpha = 60, \beta = 105, O(-11, 4)$ .

Вариант N 72

$R = 11, \alpha = 120, \beta = 165, O(12, 6)$ .

Вариант N 73

$R = 3, \alpha = -120, \beta = 90, O(11, 7)$ .

Вариант N 74

$R = 5, \alpha = 120, \beta = 30, O(6, 5)$ .

Вариант N 75

$R = 3, \alpha = -45, \beta = 105, O(-7, 2)$ .

Вариант N 76

$R = 9, \alpha = 135, \beta = 90, O(4, 10)$ .

Вариант N 77

$R = 6, \alpha = 120, \beta = 60, O(6, -4)$ .

Вариант N 78

$R = 12, \alpha = 45, \beta = 90, O(7, -9)$ .

Вариант N 79

$R = 9, \alpha = 45, \beta = 105, O(11, 12)$ .

Вариант N 80

$R = 10, \alpha = -45, \beta = 75, O(5, 4)$ .

Вариант N 81

$R = 7, \alpha = -45, \beta = 90, O(-10, 2)$ .

Вариант N 82

$R = 10, \alpha = -45, \beta = 90, O(-9, -2)$ .

Вариант N 83

$R = 4, \alpha = 90, \beta = 150, O(4, -3)$ .

Вариант N 84

$R = 8, \alpha = -90, \beta = 60, O(5, 4)$ .

Вариант N 85

$R = 4, \alpha = -60, \beta = 30, O(12, 7)$ .

Вариант N 86

$R = 7, \alpha = 30, \beta = 165, O(12, -2)$ .

Вариант N 87

$R = 7, \alpha = 135, \beta = 165, O(11, 11)$ .

Вариант N 88

$R = 6, \alpha = 135, \beta = 90, O(-10, 4)$ .

Вариант N 89

$R = 10, \alpha = 30, \beta = 150, O(10, -12)$ .

Вариант N 90

$R = 3, \alpha = 135, \beta = 75, O(-3, -10)$ .

Вариант N 91

$R = 6, \alpha = 90, \beta = 150, O(3, -10)$ .

Вариант N 92

$R = 4, \alpha = 60, \beta = 105, O(-5, -3)$ .

Вариант N 93

$R = 9, \alpha = -30, \beta = 30, O(7, 7)$ .

Вариант N 94

$R = 12, \alpha = 60, \beta = 15, O(7, 6)$ .

Вариант N 95

$R = 10, \alpha = -135, \beta = 105, O(-12, -5)$ .

Вариант N 96

$R = 7, \alpha = 45, \beta = 90, O(-10, -4)$ .

Вариант N 97

$R = 8, \alpha = -45, \beta = 75, O(8, 11).$

Вариант N 98

$R = 8, \alpha = -135, \beta = 90, O(7, -3).$

Вариант N 99

$R = 9, \alpha = 135, \beta = 105, O(-3, 6).$

Вариант N 100

$R = 8, \alpha = -60, \beta = 150, O(-10, -7).$

Вариант N 101

$R = 11, \alpha = 60, \beta = 105, O(-9, 11).$

Вариант N 102

$R = 7, \alpha = 90, \beta = 120, O(-8, -3).$

Вариант N 103

$R = 11, \alpha = -135, \beta = 90, O(6, -9).$

Вариант N 104

$R = 12, \alpha = -90, \beta = 45, O(3, 2).$

Вариант N 105

$R = 5, \alpha = 120, \beta = 165, O(11, 11).$

Вариант N 106

$R = 2, \alpha = 135, \beta = 90, O(-5, 7).$

Вариант N 107

$R = 7, \alpha = 45, \beta = 105, O(11, -8).$

Вариант N 108

$R = 12, \alpha = -45, \beta = 90, O(-11, 2).$

Вариант N 109

$R = 11, \alpha = -45, \beta = 90, O(3, 8).$

Вариант N 110

$R = 8, \alpha = 120, \beta = 75, O(-12, 8).$

Вариант N 111

$R = 5, \alpha = 45, \beta = 105, O(8, -6).$

Вариант N 112

$R = 2, \alpha = 45, \beta = 105, O(-9, -4).$

Вариант N 113

$R = 12, \alpha = 45, \beta = 135, O(-8, 9).$

Вариант N 114

$R = 6, \alpha = -120, \beta = 105, O(6, -5).$

Вариант N 115

$R = 12, \alpha = -45, \beta = 45, O(-5, -11).$

Вариант N 116

$R = 9, \alpha = 120, \beta = 75, O(-5, -6).$

Вариант N 117

$R = 9, \alpha = 90, \beta = 135, O(-10, -12).$

Вариант N 118

$R = 8, \alpha = -135, \beta = 135, O(-7, 11).$

Вариант N 119

$R = 6, \alpha = 135, \beta = 75, O(4, -6).$

Вариант N 120

$R = 10, \alpha = -90, \beta = 135, O(-8, -6).$

Вариант N 121

$R = 8, \alpha = 60, \beta = 105, O(-3, 10).$

Вариант N 122

$R = 12, \alpha = -45, \beta = 90, O(2, 8).$

Вариант N 123

$R = 11, \alpha = 45, \beta = 90, O(-2, -2).$

Вариант N 124

$R = 12, \alpha = 60, \beta = 105, O(9, 8).$

Вариант N 125

$R = 3, \alpha = 135, \beta = 15, O(-8, 7).$

Вариант N 126

$R = 6, \alpha = -135, \beta = 90, O(-7, 8).$

Вариант N 127

$R = 6, \alpha = -45, \beta = 90, O(-12, 5).$

Вариант N 128

$R = 4, \alpha = -60, \beta = 75, O(11, 4).$

Вариант N 129

$R = 3, \alpha = -135, \beta = 75, O(7, -12).$

Вариант N 130

$R = 10, \alpha = 60, \beta = 150, O(-9, -2).$

Вариант N 131

$R = 8, \alpha = 60, \beta = 15, O(-7, 6).$

Вариант N 132

$R = 9, \alpha = -60, \beta = 75, O(-10, 12).$

Вариант N 133

$R = 5, \alpha = 120, \beta = 90, O(6, -7).$

Вариант N 134

$R = 9, \alpha = 90, \beta = 45, O(2, -6).$

Вариант N 135

$R = 9, \alpha = 135, \beta = 15, O(-6, 8).$

Вариант N 136

$R = 6, \alpha = -45, \beta = 90, O(12, -6).$

Вариант N 137

$R = 7, \alpha = 90, \beta = 45, O(-5, 3)$ .

Вариант N 138

$R = 4, \alpha = 30, \beta = 90, O(12, -9)$ .

Вариант N 139

$R = 11, \alpha = -45, \beta = 165, O(12, 12)$ .

Вариант N 140

$R = 9, \alpha = -60, \beta = 150, O(-4, 2)$ .

Вариант N 141

$R = 3, \alpha = 90, \beta = 30, O(-8, 9)$ .

Вариант N 142

$R = 4, \alpha = 135, \beta = 45, O(5, 2)$ .

Вариант N 143

$R = 9, \alpha = 45, \beta = 15, O(9, -10)$ .

Вариант N 144

$R = 2, \alpha = 90, \beta = 150, O(-11, 3)$ .

Вариант N 145

$R = 12, \alpha = 135, \beta = 165, O(-9, -11)$ .

Вариант N 146

$R = 5, \alpha = -45, \beta = 45, O(9, -6)$ .

Вариант N 147

$R = 8, \alpha = -120, \beta = 105, O(4, 5)$ .

Вариант N 148

$R = 10, \alpha = 120, \beta = 30, O(-3, 9)$ .

Вариант N 149

$R = 5, \alpha = -60, \beta = 165, O(-5, -8)$ .

Вариант N 150

$R = 9, \alpha = -120, \beta = 120, O(3, 2)$ .