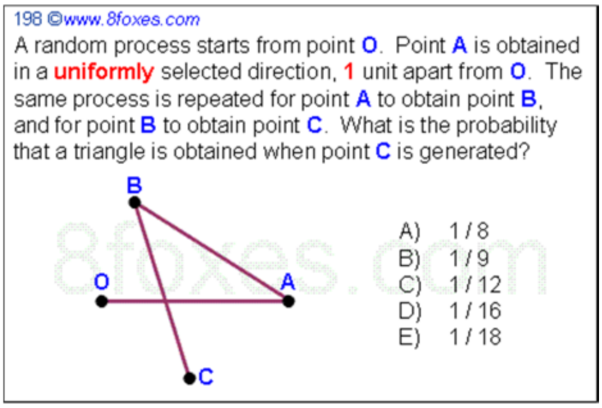
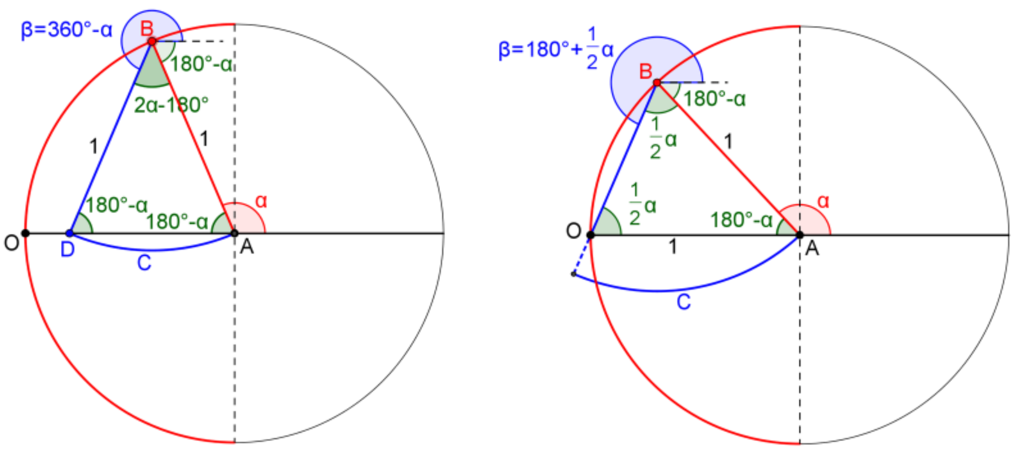
SOLUTION



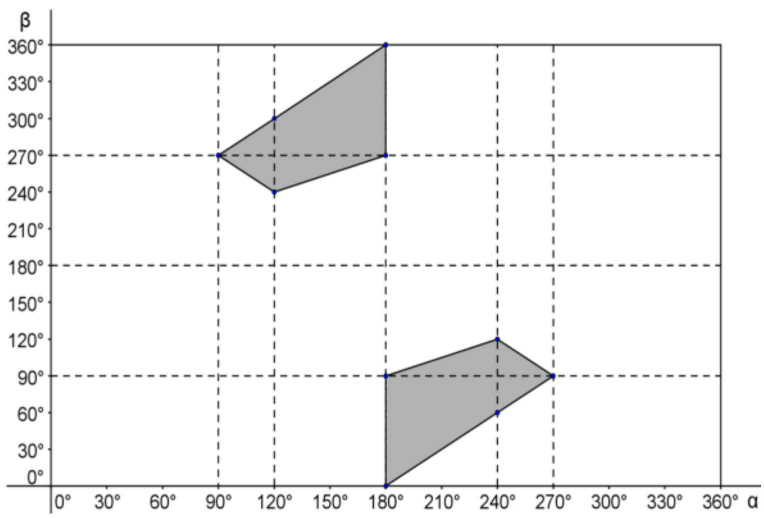
We name α the angle moving from A to B and β the angle moving from B to C with $0^o \leq \alpha, \beta \leq 360^o$, measuring the conventional way (pointing right = angle 0^o, pointing left = angle 180^o).
It is clear that B is lying on the circle with radius 1 from A.
It is clear that that B must lie on the left half of this circle (see figure, the red half circle) to make it possible to make a triangle, so it must be $90^o < \alpha < 270^o$.

- For α, with $90^o < \alpha < 120^o$ the circle with radius 1 and center B intersects OA, in A and another point between O and A. Call this point D. Triangle ABD is isosceles with top-angle $2\alpha - 180^o$. For angles β with $360^o - \alpha < \beta < (360^o - \alpha) + (2\alpha - 180^o) = 180^o + \alpha$ point C creates a triangle.
- For α, with $120^o < \alpha < 180^o$ triangle OAB is isosceles with angle $OBC = ½\alpha$. For angles β with $180^o + ½\alpha < \beta < (180^o + ½\alpha) + ½\alpha = 180^o + \alpha$ point C creates a triangle.
- For $180^o < \alpha < 270^o$ the situations are (almost) the same because of the symmetry.



In the diagram we see a rectangle [0°,360°]x[0°,360°] with all possible combinations of α and β, corresponding with probability 1.
In the gray colored areas we find the combinations of α and β with C creating a triangle.

With easy calculation you can find that this gray area is $^1/_{12}$ of the whole area.
So the probability that a triangle is obtained when point C is generated is $^1/_{12}$.



The answer is C.