Achievable

Glossary of geometry formulas and theorems

AMC 10/12 DUMP SHEET

Equation for a circle

- $(x - h)^2 + (y - k)^2 = r^2$

  where (h, k) represents the center of the circle

Brahmagupta's Formula

- $\sqrt{s\,(s-a)\,(s-b)\,(s-c)\,(s-d)}$

  $s = \dfrac{a+b+c+d}{2}$

  where a, b, c, and d are the side lengths of a cyclic quadrilateral

Sector area, arc length, and interior angle ratio formula

- sector area/(π)r^2 = arc length / 2(π)r = interior angle / 360

Sum of interior angles

- (n−2)× 180°

Equations for 2d shapes

2d Shape	Area	Perimeter
square	s^2	4s
rectangle	lw	2(l+w)
parallelogram	bh	2(a+b)
rhombus	bh or $\frac{1}{2}(d_1 d_2)$	4s
trapezoid	$\frac{1}{2}(b_1 + b_2)h$	Sum of all sides
kite	$\frac{1}{2}(d_1 d_2)$	2a + 2b