PLANE FIGURES

What Are Plane Figures?

Plane figures refer to points, lines, angles, and planes in the coordinate plane. A figure that is three-dimensional has points on many different planes. Lines can be parallel or perpendicular. Angles can be categorized as acute, obtuse or right. Angles can also be complementary or supplementary depending on how many degrees they add up to. Plane figures can also refer to shapes in the coordinate plane. Triangles, quadrilaterals and other polygons can be shown in the coordinate plane.

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based on the measure of the angle within it. If two angles of a triangle are given, the third can be found by subtracting the sum of the two angles given from 180°. In a quadrilateral, the angles add up to 360°. In a polygon with n sides, the **sum of the interior angles = (n - 2) · 180°**. If given 3 angles of a quadrilateral, the fourth angle can be found by subtracting the known angles from 360°. If angles consist of variables, the measures of the angles can be found by solving for x and substituting back into the equation for each angle. For example, what is the measure of the angle A?

∠ A = x - 21

∠ C = x + 25

∠ B = 2x + 4

Ex.
∠A + ∠B + ∠C = 180 (x - 21) + (2x + 4) + (x + 25) = 180

4x + 8 = 180   4x = 172,   x = 43°

Try

1. I   hat
   is

2. A   of
   triangle is it?

3. For the figure shown, what is the measure of each angle?

∠ A = 2x + 16   ∠ B = 4x - 7

∠ C = x - 5

∠ D = x + 12