Edulyte

AREA OF A PENTAGON FORMULA

A polygon with five sides, five angles, and five vertices is known as a pentagon. It is an important geometrical shape naturally found in nature (for example, flowers' petals) and frequently used in various man-made structures like logos, signs, architectural designs, etc. All the interior angles inside a regular pentagon sum up to 540 degrees, and each angle in a regular pentagon measures up to 108 degrees.

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Q1: If the side length of a regular pentagon is 8 cm, what is its area?

A: 17.32 square cm
B: 32 square cm
C: 68.8 square cm
D: 80 square cm

Q2: What is the area of a regular pentagon with a side length of 10 meters and an apothem of 7.07 meters?

A: 354 square meters
B: 500 square meters
C: 707 square meters
D: 1000 square meters

Q3: Which formula is used to find the area of an irregular pentagon?

A: A = 1/2 × base × height
B: A = s^2 / (4 * tan(π/5))
C: A = 5s^2 / (4 * tan(π/5))
D: A = perimeter × apothem / 2

Q4: What is the sum of the interior angles of a pentagon?

A: 180 degrees
B: 360 degrees
C: 540 degrees
D: 560 degrees

Q5: What is the measure of each interior angle in a regular pentagon?

A: 480 degrees
B: 108 degrees
C: 90 degrees
D: 45 degrees

Q6: In a regular pentagon, how many sides are of equal length?

A: Two
B: Four
C: Three
D: Five

Q7: What is NOT a property of a regular pentagon?

A: All sides are equal
B: It may have equal sides and unequal angles
C: All angles are equal
D: It has a fivefold rotational symmetry

Q8: If an irregular pentagon is divided into a triangle and a trapezoid, what is the area of the pentagon?

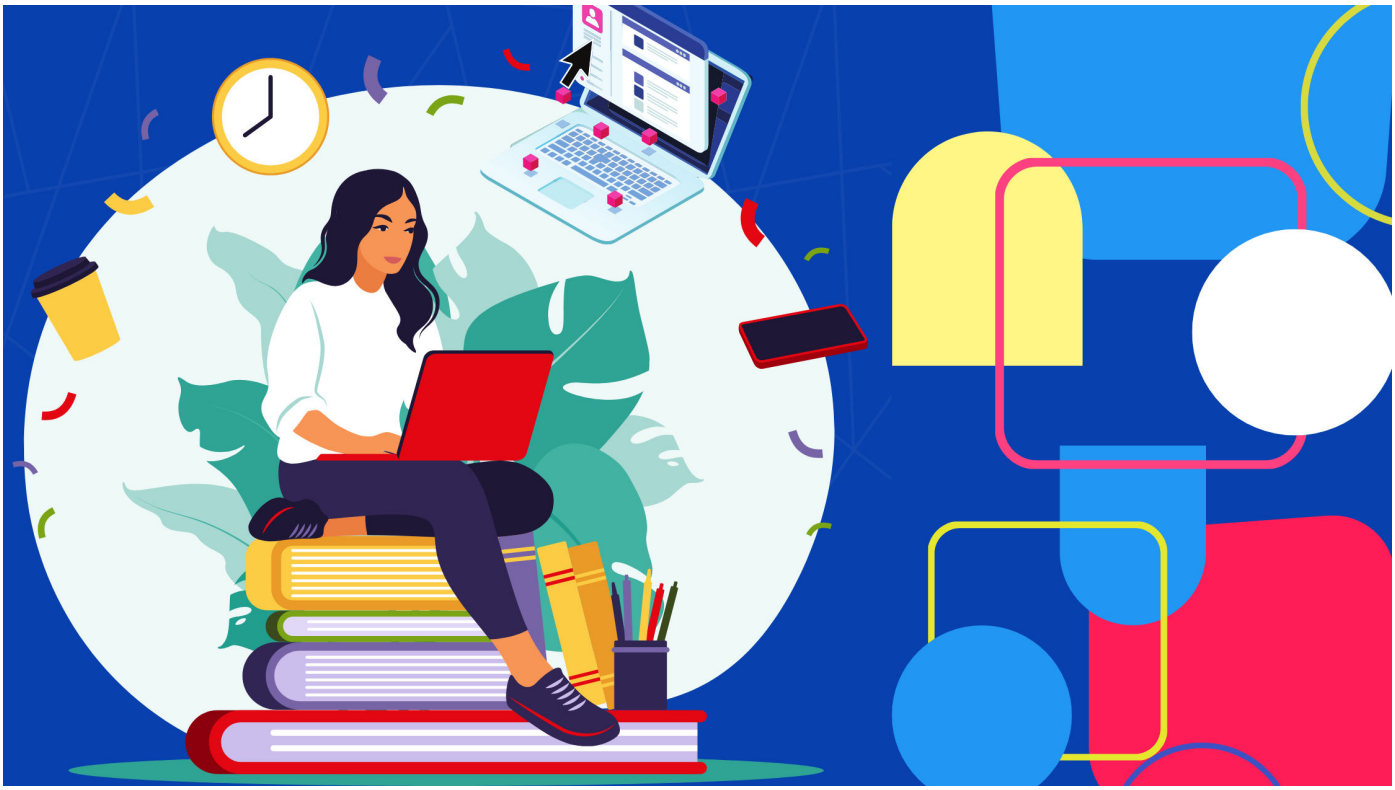
A: Sum of the areas of triangle and trapezoid
B: Product of the areas of triangle and trapezoid
C: Difference of the areas of triangle and trapezoid
D: Average of the areas of triangle and trapezoid

Q9: What is the area of an irregular pentagon with a base of 8 cm and a height of 10 cm?

A: 20 sq cm
B: 60 sq cm
C: 80 sq cm
D: 100 sq cm

Q10: What best defines a convex pentagon?

A: All internal angles are more than 180 degrees
B: All internal angles are equal to 180 degrees
C: All internal angles are less than 180 degrees
D: All internal angles are less than 90 degrees



Answers

Q1: C - 68.8 square cm

Q2: A - 354 square meters

Q3: A - A = 1/2 × base × height

Q4: C - 540 degrees

Q5: B - 108 degrees

Q6: D - Five

Q7: B - It may have equal sides and unequal angles

Q8: A - Sum of the areas of triangle and trapezoid

Q9: B - 60 sq cm

Q10: C - All internal angles are less than 180 degrees