

2022 Geometry The Secret of Finding The Area of A Regular Polygon (Geometry 11.3)

Lesson 061 | Geometry | Area and perimeter

<https://www.youtube.com/watch?v=fkplZLYcbeY>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

A regular polygon has perimeter 56 cm and apothem 11 cm. Find its area.

02

A regular polygon has perimeter 16 cm and apothem 7 cm. Find its area.

03

A regular polygon has perimeter 120 cm and apothem 2 cm. Find its area.

2022 Geometry The Secret of Finding The Area of A Regular Polygon (Geometry 11.3)

Lesson 061 | Geometry | Area and perimeter

<https://www.youtube.com/watch?v=fkplZLYcbeY>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

04

A regular polygon has perimeter 264 cm and apothem 8 cm. Find its area.

05

A regular polygon has perimeter 66 cm and apothem 6 cm. Find its area.

06

A regular polygon has perimeter 40 cm and apothem 14 cm. Find its area.

2022 Geometry The Secret of Finding The Area of A Regular Polygon (Geometry 11.3)

Lesson 061 | Geometry | Area and perimeter

<https://www.youtube.com/watch?v=fkplZLYcbeY>

Original practice aligned to the saved video title.

01

A regular polygon has perimeter 56 cm and apothem 11 cm. Find its area.

Split into triangles with height equal to the apothem.

$$A = (1/2) \cdot \text{apothem} \cdot \text{perimeter} = (1/2)(11)(56) = 308 \text{ cm}^2.$$

02

A regular polygon has perimeter 16 cm and apothem 7 cm. Find its area.

Split into triangles with height equal to the apothem.

$$A = (1/2) \cdot \text{apothem} \cdot \text{perimeter} = (1/2)(7)(16) = 56 \text{ cm}^2.$$

03

A regular polygon has perimeter 120 cm and apothem 2 cm. Find its area.

Split into triangles with height equal to the apothem.

$$A = (1/2) \cdot \text{apothem} \cdot \text{perimeter} = (1/2)(2)(120) = 120 \text{ cm}^2.$$

2022 Geometry The Secret of Finding The Area of A Regular Polygon (Geometry 11.3)

Lesson 061 | Geometry | Area and perimeter

<https://www.youtube.com/watch?v=fkplZLYcbeY>

Original practice aligned to the saved video title.

04

A regular polygon has perimeter 264 cm and apothem 8 cm. Find its area.

Split into triangles with height equal to the apothem.

$$A = (1/2) \cdot \text{apothem} \cdot \text{perimeter} = (1/2)(8)(264) = 1056 \text{ cm}^2.$$

05

A regular polygon has perimeter 66 cm and apothem 6 cm. Find its area.

Split into triangles with height equal to the apothem.

$$A = (1/2) \cdot \text{apothem} \cdot \text{perimeter} = (1/2)(6)(66) = 198 \text{ cm}^2.$$

06

A regular polygon has perimeter 40 cm and apothem 14 cm. Find its area.

Split into triangles with height equal to the apothem.

$$A = (1/2) \cdot \text{apothem} \cdot \text{perimeter} = (1/2)(14)(40) = 280 \text{ cm}^2.$$