

GRE Geometry Practice Test 4

1)

A clock has two equally long hands on it, each measuring 6 inches. If the minute hand is directly on 6 and the hour hand is directly in the middle of 10 and 11, what is the distance between the two hands?

Possible Answers:

$$2\pi$$

$$\frac{3\pi}{2}$$

$$12\pi$$

$$\frac{7\pi}{3}$$

$$\frac{9\pi}{2}$$

2)

A clock has two equally long hands on it, each measuring 3 inches and extending to the edge of the clock. If the minute hand is directly on 12 and the hour hand is directly on 10, what is the length of the minor arc connecting the two hands?

Possible Answers:

$$\frac{\pi}{6}$$

$$\frac{2\pi}{5}$$

$$\pi$$

$$1.25\pi$$

$$2\pi$$

3)

Quantitative Comparison

Quantity A: The degree measure of any angle in an equilateral triangle

Quantity B: The degree measure of any angle in a regular hexagon

Possible Answers:

The relationship cannot be determined from the information given.

The two quantities are equal.

Quantity A is greater.

Quantity B is greater.

4)

Quantity A: Double the measure of a single interior angle of an equilateral triangle.

Quantity B: The measure of a single interior angle of a hexagon.

Possible Answers:

The quantities are equal.

Quantity B is bigger.

The relationship cannot be determined with the information given.

Quantity A is bigger.

5)

The perimeter of a regular pentagon is 40 units. What is the area of the pentagon?

Possible Answers:

$$A = 2\sqrt{5(5 + 2\sqrt{5})}$$

$$A = \frac{25}{4}\sqrt{5(5 + 2\sqrt{5})}$$

$$A = 8\sqrt{5(5 + 2\sqrt{5})}$$

$$A = 16\sqrt{5(5 + 2\sqrt{5})}$$

6)

In a five-sided polygon, one angle measures 105° . What are the possible measurements of the other angles?

Possible Answers:

145, 155, 160, 155

160, 160, 150, 140

115, 95, 110, 120

105, 105, 105, 110

120, 115, 95, 105

7)

In a particular heptagon (a seven-sided polygon) the sum of four equal interior angles, each equal to a degrees, is equivalent to the sum of the remaining three interior angles.

Quantity A: a

Quantity B: 110

Possible Answers:

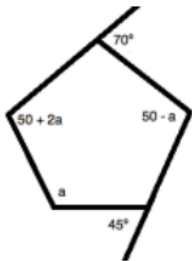
Quantity A is greater.

Quantity B is greater

The two quantities are equal.

The relationship cannot be determined.

8)



What is the value of a in the figure above?

Possible Answers:

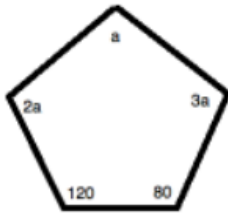
210

105

195

97.5

9)



Quantity A: The measure of the largest angle in the figure above.

Quantity B: 120

Which of the following is true?

Possible Answers:

The two quantities are equal.

The relationship cannot be determined.

Quantity B is larger.

Quantity A is larger.

10)

What is the perimeter of an isosceles triangle given that the sides 5 units long and half of the base measures to 4 units?

Possible Answers:

14

32

12

18

20