GRE Geometry Practice Test 9

Question 1

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

Possible Answers:

$105, 105, 105, 110$

$115, 95, 110, 120$

$120, 115, 95, 105$

$145, 155, 160, 155$

$160, 160, 150, 140$

Correct answer:

$120, 115, 95, 105$

Question 2

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:

The relationship cannot be determined.

Quantity B is greater

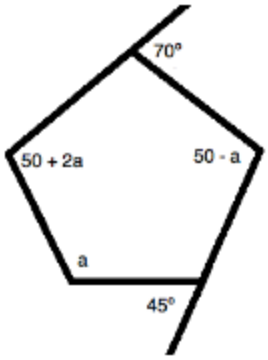
The two quantities are equal.

Quantity A is greater.

Correct answer:

Quantity A is greater.

Question 3



What is the value of a in the figure above?

Possible Answers:

97.5

210

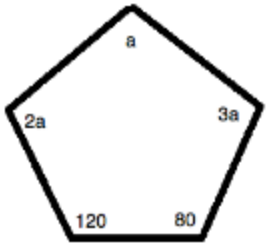
195

105

Correct answer:

97.5

Question 4



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

Quantity B: 120

Which of the following is true?

Possible Answers:

The relationship cannot be determined.

Quantity A is larger.

Quantity B is larger.

The two quantities are equal.

Correct answer:

Quantity A is larger.

Question 5

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:

12

20

18

32

14

Correct answer: 18

Question 6

An acute Isosceles triangle has two sides with length a and one side length b. The length of side $a = \frac{3}{9}$ ft. If the length of $b =$ half the length of side a, what is the perimeter of the triangle?

Possible Answers:

$\frac{4}{6}$ foot

6 inches

1 foot

$\frac{2}{6}$ foot

10 inches

Correct answer:

10 inches

Question 7

An acute Isosceles triangle has two sides with length a and one side length b. The length of side $a = 13$. If the length of $b =$ half the length of side a, what is the perimeter of the triangle?

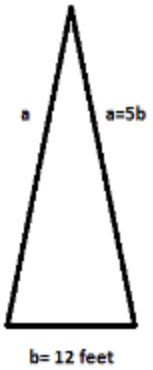
Possible Answers:

26
26.5
34.5
32.5
34

Correct answer:

32.5

Question 8



Find the perimeter of the acute Isosceles triangle shown above.

Possible Answers:

130

60

120

133

132

Correct answer:

132

Question 9

An obtuse Isosceles triangle has two sides with length a and one side length b. The length of side $b = \frac{3}{4}$ ft. If the length of $a =$ half the length of side b, what is the perimeter of the triangle?

Possible Answers:

$\frac{12}{4}$ ft

$1\frac{1}{3}$ ft

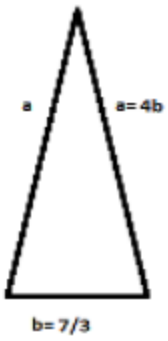
$1\frac{1}{2}$ ft

$1\frac{2}{3}$ ft

Correct answer:

$1\frac{1}{2}$ ft

Question 10



Find the perimeter of the acute Isosceles triangle shown above.

Possible Answers:

18
21
$\frac{35}{3}$
27
$\frac{56}{3}$

Correct answer:

21