

# GRE Quant Foundation Assessment Test (Geometry)

Total points 34/44 ?

This is an assessment designed to assess your GRE Quant Foundation knowledge. None of the questions are tricky. None of the questions are puzzles. They solely test knowledge.

**Calculators:** You can use a calculator but it has to be one of those crappy ones like the one on your phone when you turn it vertically. Or the one on the ETS website in the PowerPrep exams. Or <https://www.gregmat.com/tools/calculator>

Email \*

irfanshuvo88@gmail.com

✓ A line segment extends infinitely in two directions. 1/1

☐ True

☒ False



✓ An obtuse angle is any angle with a measure greater than  $90^\circ$ . 1/1

☐ True

☒ False



✓ A polygon is a closed figure with at least three sides.

1/1

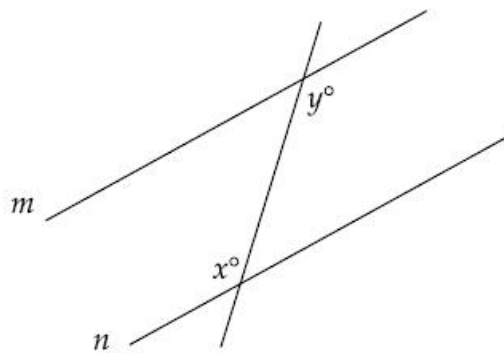
☒ True



☐ False

✓ If lines  $m$  and  $n$  are parallel, which of the following quantities is bigger?

1/1



☐  $x$

☐  $y$

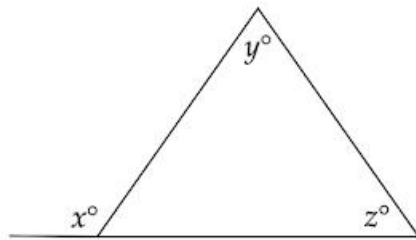
☒ The two quantities are equal.



☐ It cannot be determined.

✓ Which of the following quantities is bigger?

1/1

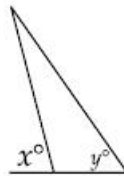


- ☐ x
- ☐  $y + z$
- ☒ The two quantities are equal.
- ☐ It cannot be determined.



✓ Which of the following quantities is bigger?

1/1



- ☒ x
- ☐ y
- ☐ The two quantities are equal.
- ☐ It cannot be determined.



✓ What is the sum of all of the interior angles of a polygon with 11 sides? 1/1

1620



✗ What is the measure of each interior angle of a hexagon?

0/1

☐ 108°

☒ 120°



☐ 144°

☐ It cannot be determined.

Correct answer

☒ It cannot be determined.

✓ What is the measure of each interior angle in degrees of a regular decagon (10-sided polygon)? 1/1

144



✓ Which of the following quantities is larger?

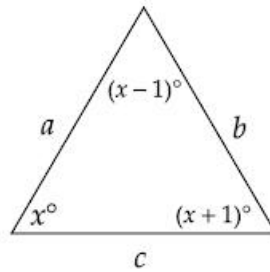
1/1

- ☐ The sum of the exterior angles of a triangle.
- ☐ The sum of the exterior angles of a 100-sided polygon.
- ☒ The two quantities are equal.
- ☐ It cannot be determined.



✓ Given the picture below, which of the following is correct?

1/1



- ☒  $a > b > c$
- ☐  $a > c > b$
- ☐  $b > a > c$
- ☐  $b > c > a$
- ☐  $c > b > a$
- ☐  $c > a > b$



- ✓ If two sides of a triangle are 4 and 7 respectively, then the length of the third side could be which of the following? 1/1

*Select all that apply.*

☐ 2

☐ 3

☒ 5

☒ 8

☒ 10

☐ 12

☐ 14



- ✗ A triangle has a height of 7 and a base of 3. What is its area? 0/1

21/2



Correct answer

10.5

✓ Which of the following scenarios correctly identifies two congruent triangles?

1/1

*Select all that apply.*

☒ SSS

✓

☒ SAS

✓

☐ AAA

☒ ASA

✓

☒ AAS

✓

☐ SSA

✗ A right triangle has side lengths of 3 and 4. What is the length of the third side? 0/1

☒ 5

✗

☐ It cannot be determined.

Correct answer

☒ It cannot be determined.

✓ A right triangle has a hypotenuse of 15 and one side length of 8. What is the length of the third side? 1/1

*Round your answer to the nearest tenth.*

12.7

✓

- ✓ If the perimeter of a right triangle is 12, and every side is an integer, what is  $\frac{1}{1}$  the triangle's area?

6



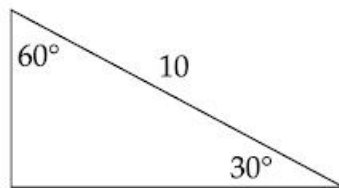
- ✓ A Pythagorean triplet has a perimeter of 30. What is the length of its hypotenuse?  $\frac{1}{1}$

13



- ✓ What is the area of the triangle below?  $\frac{1}{1}$

*Round your answer to the nearest tenth.*



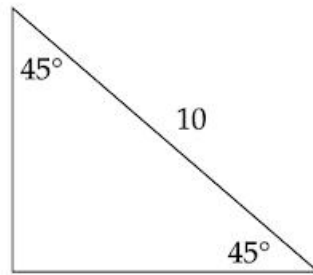
21.7





✓ What is the area of the triangle below?

1/1



25



✗ What is the area of an equilateral triangle with side length 5?

0/1

*Round your answer to the nearest tenth.*

10.9



Correct answers

10.6

10.8

✓ Which of the following is/are always a parallelogram with four equal sides? 1/1

Select all that apply.

☒ Square



☐ Rectangle

☐ Parallelogram

☒ Rhombus



☐ Trapezoid

✓ Adjacent angles in a parallelogram always add up to  $180^\circ$ .

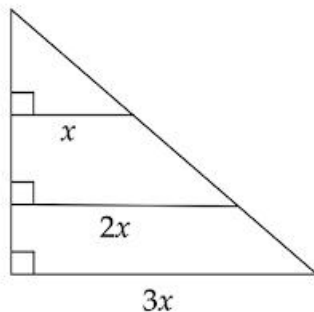
1/1

☒ True



☐ False

✓ If the area of the smallest triangle in the diagram below is 8, what is the area of the largest triangle? 1/1

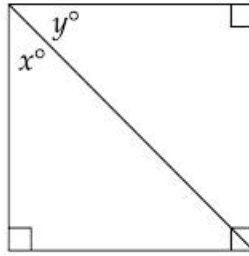


72



✗ Which of the following quantities is larger?

0/1



- ☐ x
- ☐ y
- ☒ The two quantities are equal.
- ☐ It cannot be determined.

✗

Correct answer

- ☒ It cannot be determined.

✗ What is the area of a trapezoid with a smaller base of 3, a larger base of 6, and a height of 7? 0/1

15.75

✗

Correct answer

31.5

✓ What is the area of a regular hexagon with a side length of 8?

1/1

*Round your answer to the nearest integer.*

166



Correct answers

163

166

Correct Answer

✓ All of the polygons below have the same perimeter. Which has the largest area? 1/1

☐ A rectangle with a length that is greater than its width

☒ A square



☐ A rhombus with one angle not equal to  $90^\circ$

☐ A parallelogram with one angle measuring  $80^\circ$

✗ If you were given 100 feet of rope and asked to use the rope to form a closed shape, what is the largest area you could enclose (in square feet)? 0/1

*Round your answer to the nearest integer.*

625



Correct answers

796

795

✓ What are two commonly used estimates for  $\pi$ ?

1/1

- ☐ 3
- ☐ 3.1
- ☒ 3.14
- ☒  $22/7$

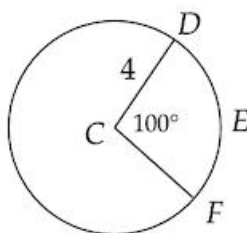
✓

✓

✓ If C is the center of the circle, what is the length of arc DEF?

1/1

*Round your answer to the nearest hundredth.*

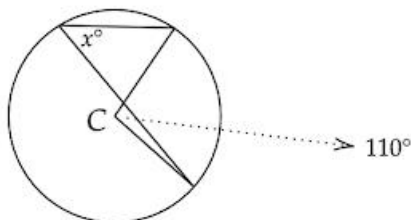


6.98

✓

✓ If C is the center of the circle, what does x equal?

1/1



55

✓

- ✓ If a circle has a radius of 12, what is the area of a sector of that circle with a central angle of  $45^\circ$ ? 1/1

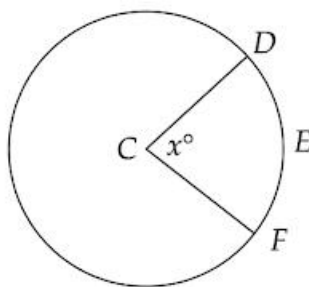
*Round your answer to the nearest tenth.*

56.5



- ✗ Arc DEF is equal to the radius of the circle with center C. 0/1

Which of the following quantities is bigger?



- ☒ x
- ☐ 60
- ☐ The two quantities are equal.
- ☐ It cannot be determined.



Correct answer

- ☒ 60

✗ A quadrilateral is inscribed in a circle of radius 6. What is the largest possible area of this quadrilateral?

.../1

36

✗

Correct answer

72

✓ Which of the following 3D shapes are **NOT** tested on the GRE?

☐

Cube

☐

Rectangular Solid

☒

Sphere

✓

☐

Right Cylinder

☒

Cone

✓

☒

Pyramid

✓

#### Feedback

*This question has been zero-scored, as the question as written is misleading. What we meant is that while these shapes COULD come on the test, you won't be expected to know the formulas. They'll provide it for you.*

✓ What is the volume of a cube with side length 8?

1/1

512

✓

✓ What is the surface area of a cube with side length 10?

1/1

600



✓ What is the volume of a rectangular solid with side lengths of 3, 4, and 5?

1/1

60



✓ What is the surface area of a rectangular solid with side lengths 6, 8, and 10?

1/1

376



✓ A cube's volume is always greater than its surface area.

1/1

☐ True

☒ False





✓ What is the length of the longest diagonal of a cube of side length 7? 1/1

*Round your answer to the nearest tenth.*

12.1



Correct answers

11.9

12.1

✓ What is the length of the longest diagonal of a rectangular solid with side lengths 5, 9, and 13? 1/1

*Round your answer to the nearest tenth.*

16.6



✓ What is the volume of a right cylinder with a radius of 4 and height of 10? 1/1

*Round your answer to the nearest integer.*

503



✖ What is the surface area of a right cylinder with a radius of 6 and a height of 6? 0/1

*Round your answer to the nearest integer.*

249

✖

Correct answers

452

453

This form was created inside of Greg Mat. [Report Abuse](#)

Google Forms

