

Practice Problems for Geometry
from www.topmath.info

1 What word describes an angle that measures less than 90 degrees?

2 On a standard circular clock face, point A is on the 7, point B is the center of the clock, and point C is on the 10. What is the measure of angle ABC in degrees?

3 (T/F): Some triangles have two right angles.

4 (T/F): Some, but not all equilateral triangles are right triangles.

5 (T/F): The angles of an obtuse triangle add up to less than the angles of an acute triangle.

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6 Two sides of a triangle are 5 and 10 units long. If the perimeter of the triangle is p , and $a < p < b$, what are the largest possible value of a and the smallest possible value of b ?

7 (T/F): All quadrilaterals are trapezoids.

8 (T/F): A quadrilateral may contain exactly one right angle.

9 Points X, B, C, D, E, and Y are six distinct points located in that order along an arc. Point Z is the midpoint of line segment XY. If angles BZX, CZB, DZC, EZD, and YZE all measure x° , what is x ?

10 Sharon draws a circle of radius 4 cm inside a circle of radius 13 cm. What is the area between the two circles in square cm, if $\pi = 3.14$?

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11 (T/F): No circle has any line of symmetry.

12 A 1-centimeter cube has a mass of 7 grams. What would be the mass in grams of a 3-centimeter cube of the same material?

13 How many sides does a pentagon have?

14 (T/F): No polygon is a heptagon.

15 Points A, B, C, and D are in that order on a line. The distance from A to C is 31 inches, from B to C is 18 inches, and from B to D is 44 inches. How long is it from A to D?

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1 ANSWER: acute

2 ANSWER: 90

3 ANSWER: False

4 ANSWER: False. EXPLANATION: In an equilateral triangle, each angle is 60 degrees. Therefore, an equilateral triangle can never be a right angle, which has a 90 degree angle.

5 ANSWER: False. EXPLANATION: The angles of any triangle add up to exactly 180 degrees.

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6 ANSWER: 20 and 30 units. EXPLANATION: The unknown side must be longer than 5 units in order for the sum of the first and third sides to be longer than the second side. It can be no longer than 15 units, though; otherwise, it would be longer than the sum of the first two sides.

7 ANSWER: False

8 ANSWER: True

9 ANSWER: 36° . EXPLANATION: The sum of the five angles is the straight angle XY. Since a straight angle equals 180° , you simply divide 180° by 5 to obtain the answer.

10 ANSWER: 480.42

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11 ANSWER: False

12 ANSWER: 189

13 ANSWER: 5

14 ANSWER: False

15 ANSWER: 57 inches. EXPLANATION: Since the distance from A to C is 31 inches, and the distance from B to C is 18 inches, we can subtract to find that the distance from A to B must be 13 inches. Add this to the distance from B to D (44 inches) to get the distance from A to D.