# **Geometric Measurement Comprehension Check**

For questions 1-3, match each vocabulary term to the correct definition:

|  |  |
| --- | --- |
| 1. Circumference | a. the distance across a circle through its center |
| 2. Diameter | b. the distance from the center of a circle to any point on its edge |
| 3. Radius | c. the distance around a circle |

1. Circumference –
2. Diameter –
3. Radius –
4. What formula is used to find the area of a triangle? Use it to determine the area of a triangle with a base of 5 in and a height of 4 in.
5. How does the formula for the area of squares and rectangles relate to the formula for the area of triangles?
6. What is the formula for the area of a parallelogram? Use it to determine the height of a parallelogram if its base is 4 cm and its area is 36 sq. cm.
7. What is the formula for the area of a trapezoid? Use it to determine the area of a trapezoid with a height of 4 cm and bases of 3 cm and 5 cm.
8. What is the formula for the circumference of a circle? If the circumference of a circle is 8π in, what is its radius?
9. What is the formula for the area of a circle? If the diameter of a circle is 4 mm, what is its area?
10. How do you determine the volume of a rectangular prism? What is the volume of a rectangular prisms with a length of 7 inches, a width of 4 inches, and a height of 5 inches?

# **Geometric Measurement Comprehension Check Answer Key**

For questions 1-3, match each vocabulary term to the correct definition:

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| 1. Circumference | a. the distance across a circle through its center |
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1. Circumference – c
2. Diameter – a
3. Radius – b
4. What formula is used to find the area of a triangle? Use it to determine the area of a triangle with a base of 5 in and a height of 4 in.
   1. The formula used to find the area of a triangle is , where *A* represents the area of the triangle, *b* represents the length of the base, and *h* represents the height.
   2. If we use that formula, we can determine that a triangle with a base of 5 in and a height of 4 in has an area of 10 square inches.
5. How does the formula for the area of squares and rectangles relate to the formula for the area of triangles?
   1. The formula for the area of squares and rectangles is . This relates to the formula for the area of a triangle () because a triangle covers half the space of a square or rectangle, so it makes sense that its formula includes multiplying by the fraction .
6. What is the formula for the area of a parallelogram? Use it to determine the height of a parallelogram if its base is 4 cm and its area is 36 sq. cm.
   1. The formula for the area of a parallelogram is the same as those of rectangles and squares, . In this example, 36 = *b* x4. If we apply our knowledge of expressions and equations, we can divide 36 by 4 to determine that *b*, the base, is equal to 9 cm.
7. What is the formula for the area of a trapezoid? Use it to determine the area of a trapezoid with a height of 4 cm and bases of 3 cm and 5 cm.
   1. The formula for the area of a trapezoid is . If we use our algebraic thinking, we can solve that expression to find the area as 16 square cm.
8. What is the formula for the circumference of a circle? If the circumference of a circle is 8π in, what is its radius?
   1. The formula for the circumference of a circle is , or . If the circumference is 8π in, we can divide 8 by 2 to determine the radius as 4 inches.
9. What is the formula for the area of a circle? If the diameter of a circle is 4 mm, what is its area?
   1. The formula for the area of a circle is . If the diameter of a circle is 4mm, its area is 16π square cm.
10. How do you determine the volume of a rectangular prism? What is the volume of a rectangular prisms with a length of 7 inches, a width of 4 inches, and a height of 5 inches?
    1. In order to determine the volume of a rectangular prism, you can multiply the length, width, and height together. For example, a prism with a length of 7 inches, a width of 4 inches, and a height of 5 inches has an area of 7 in x 4 in x 5 in, or 140 cubic in.