**GEOM CH. 10.1-10.3, 10.5-10.7 REVIEW**

**Multiple Choice**

*Identify the choice that best completes the statement or answers the question.*

**Find the area. The figure is not drawn to scale.**

\_\_\_\_ 1. 

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 10.8 cm2 | b. | 5.4 cm2 | c. | 21.6 cm2 | d. | 7.4 cm2 |

\_\_\_\_ 2. 

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 607.32 in.2 | b. | 36.7 in.2 | c. | 303.66 in.2 | d. | 77.2 in.2 |

\_\_\_\_ 3.



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 144.5 cm2 | b. | 127 cm2 | c. | 172 cm2 | d. | 50 cm2 |

\_\_\_\_ 4. 

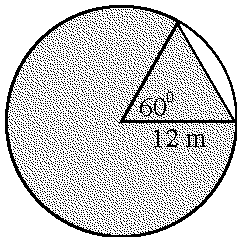
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. |  | b. |  | c. |  | d. |  |

\_\_\_\_ 5. Find the area of the figure to the nearest tenth.



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 74.2 in.2 | b. | 8.2 in.2 | c. | 148.4 in.2 | d. | 23.6 in.2 |

\_\_\_\_ 6. Find the area of the shaded region. Leave your answer in terms of  and in simplest radical form.



|  |  |  |  |
| --- | --- | --- | --- |
| a. |  | c. |  |
| b. |  | d. | none of these |

\_\_\_\_ 7. The area of a parallelogram is 420 cm2 and the height is 35 cm. Find the corresponding base.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 385 cm | b. | 455 cm | c. | 14,700 cm2 | d. | 12 cm |

\_\_\_\_ 8. Find the probability that a point chosen at random from  is on the segment .



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. |  | b. |  | c. |  | d. |  |

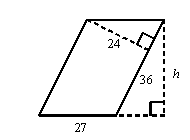
\_\_\_\_ 9. Find the area of an equilateral triangle with radius 8 m. Leave your answer in simplest radical form.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | m2 | b. | m2 | c. | m2 | d. | m2 |

\_\_\_\_ 10. A gardener needs to cultivate a triangular plot of land. One angle of the garden is 47, and two sides adjacent to the angle are 77 feet and 76 feet. To the nearest tenth, what is the area of the plot of land?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 2163.5 ft | b. | 2139.9 ft | c. | 4279.9 ft | d. | 1995.5 ft |

\_\_\_\_ 11. Find the value of *h* in the parallelogram.



Not drawn to scale

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 32 | b. | 28 | c. | 40.5 | d. | 35 |

**Find the area of the circle. Leave your answer in terms of .**

\_\_\_\_ 12. 

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 25.92 m2 | b. | 1.8 m2 | c. | 12.96 m2 | d. | 46.66 m2 |

\_\_\_\_ 13. The Ruffs are planning to buy an above-ground swimming pool shaped as a regular octagon. The radius of the octagon is 9 feet. To the nearest tenth, find the area of the surface of the water in the pool.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 458.2 ft | b. | 553.1 ft | c. | 94.8 ft | d. | 229.1 ft |

\_\_\_\_ 14. Given the regular hexagon, find the measure of each numbered angle.



|  |  |  |  |
| --- | --- | --- | --- |
| a. |  | c. |  |
| b. |  | d. |  |

\_\_\_\_ 15. Find the area of the regular polygon. Round your answer to the nearest tenth.



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 176.6 in.2 | b. | 966.1 in.2 | c. | 80.0 in.2 | d. | 483.0 in.2 |

**Find the area of the regular polygon. Give the answer to the nearest tenth.**

\_\_\_\_ 16. hexagon with side 8 yd

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 332.6 yd | b. | 12 yd | c. | 41.6 yd | d. | 166.3 yd |

**Find the area of the trapezoid. Leave your answer in simplest radical form.**

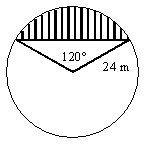
\_\_\_\_ 17. 

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 63 cm2 | b. | 70 cm2 | c. | 24.5 cm2 | d. | 9 cm2 |

\_\_\_\_ 18. A kite has diagonals 9.2 ft and 8 ft. What is the area of the kite?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 36.8 ft2 | b. | 8.6 ft2 | c. | 73.6 ft2 | d. | 34.4 ft2 |

\_\_\_\_ 19. Find the exact area of the shaded region.



|  |  |  |  |
| --- | --- | --- | --- |
| a. |  | c. |  |
| b. |  | d. | none of these |

\_\_\_\_ 20. An isosceles triangle has area of 110 ft2. If the base is 14 ft, what is the length of the legs? Round your answer to the nearest tenth.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 21 ft | b. | 17.2 ft | c. | 14.8 ft | d. | 442.9 ft |

\_\_\_\_ 21. In trapezoid *PQRS, ..* Find the area of *PQRS.* Leave your answer in simplified radical form.



|  |  |  |  |
| --- | --- | --- | --- |
| a. |  | c. |  |
| b. |  | d. |  |

\_\_\_\_ 22. Name the major arc and find its measure.



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | arc *ADB*; 50 | b. | arc *AB*; 50 | c. | arc *ADB*; 310 | d. | arc *AB*; 310 |

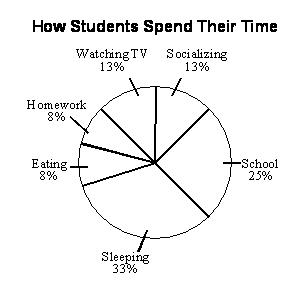
\_\_\_\_ 23. The circumference of a circle is 60 cm. Find the diameter, the radius, and the length of an arc of 140°.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 60 cm; 30 cm; 23.3 cm | c. | 120 cm; 30 cm; 160 cm |
| b. | 60 cm; 120 cm; 11.7 cm | d. | 30 cm; 60 cm; 11.7 cm |

\_\_\_\_ 24. Grade 7 students were surveyed to determine how many hours a day they spent on various activities. The results are shown in the circle graph below. Find the measure of each central angle in the circle graph.

**a.** Sleeping

**b.** Eating



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 118.8°; 28.8° | b. | 108°; 28.8° | c. | 118.8°; 288° | d. | 59.4°; 288° |

**Find the circumference. Leave your answer in terms of .**

\_\_\_\_ 25. 

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | cm | b. | cm | c. | cm | d. | cm |

\_\_\_\_ 26. Find the area of a regular hexagon with side length of 8 m. Round your answer to the nearest tenth.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 55.4 m2 | b. | 166.3 m2 | c. | 83.1 m2 | d. | 288 m2 |

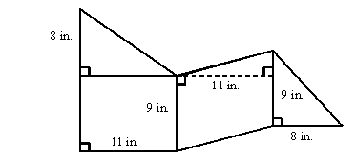
**Short Answer**

27. Identify a semicircle that contains *C*.



**Find the area. The figure is not drawn to scale.**

28. 

29. 

30. 

31. 

32. Name the minor arc and find its measure.



33. You are planning to use a ceramic tile design in your new bathroom. The tiles are blue and white equilateral triangles. You decide to arrange the blue tiles in a hexagonal shape as shown. If the side of each tile measures 7 centimeters, what will be the exact area of each hexagonal shape?



34. Divers looking for a sunken ship have defined the search area as a triangle with adjacent sides of length 2.75 miles and 1.32 miles. The angle between the sides of the triangle is 35. To the nearest hundredth, find the search area.

35. Given the regular polygon, find the measure of each numbered angle.



**Find the area of the regular polygon. Give the answer to the nearest tenth.**

36. pentagon with radius 8 m

37. Find the area of a polygon with the vertices of (–2, 3), (1, 3), (5, –3), and (–2, –3).

**Find the area of the trapezoid. Leave your answer in simplest radical form.**

38. 

39. Find the area of the rhombus.



**Find the area of a parallelogram with the given vertices.**

40. *P*(1, 3), *Q*(3, 3), *R*(7, 8), *S*(9, 8)

41. Find the area of an equilateral triangle with side 12.

**Find the circumference. Leave your answer in terms of .**

42. 

**Find the area of the triangle. Give the answer to the nearest tenth. The drawing may not be to scale.**

43. 

44. Find the length of arc *XPY*. Leave your answer in terms of .



45. A parallelogram has sides 19.5 m and 40.5 m. The height corresponding to the 19.5-m base is 8.1 m. Find the height, to the nearest tenth of a meter, corresponding to the 40.5-m base.

46. Given a regular hexagon, find the measures of the angles formed by (a) two consecutive radii and (b)a radius and a side of the polygon.

47. Find the area of a sector with a central angle of 180° and a diameter of 5.6 cm. Round to the nearest tenth.

48. A regular hexagon has a perimeter of 150 m. Find its area. Leave your answer in simplest radical form.

**Find the area of the circle. Leave your answer in terms of .**

49. 

**GEOM CH. 10.1-10.3, 10.5-10.7 REVIEW**

**Answer Section**

**MULTIPLE CHOICE**

1. ANS: B

2. ANS: C

3. ANS: A

4. ANS: A

5. ANS: A

6. ANS: C

7. ANS: D

8. ANS: D

9. ANS: B

10. ANS: B

11. ANS: A

12. ANS: C

13. ANS: D

14. ANS: C

15. ANS: D

16. ANS: D

17. ANS: A

18. ANS: A

19. ANS: B

20. ANS: B

21. ANS: A

22. ANS: C

23. ANS: A

24. ANS: A

25. ANS: D

26. ANS: B

**SHORT ANSWER**

27. ANS:

semicircle *ACB*

28. ANS:

70 in.2

29. ANS:

278 in.2

30. ANS:

15 yd2

31. ANS:

1188 in.2

32. ANS:

arc *AB;* 115°

33. ANS:

73.5 cm2

34. ANS:

1.04 mi

35. ANS:



36. ANS:

152.2 m

37. ANS:

30 units2

38. ANS:

 ft2

39. ANS:

128 m2

40. ANS:

10 units2

41. ANS:



42. ANS:

 in.

43. ANS:

10.5 m

44. ANS:

12 m

45. ANS:

3.9 m

46. ANS:

60°; 60°

47. ANS:

12.3 cm2

48. ANS:

 m2

49. ANS:

4.2025 m2