Name _____ Date _____

Perimeter and Area

Enter answers in text boxes.

Complete.

1. What is the area of a square with perimeter 192 m?

2. If the height of a rectangle is 33.1 mm and the base is 30.7 mm, what is the area of the rectangle?

Complete.

3. Find the area of the rectangle whose vertices are
(-5, 0), (-5, 6), (0, 0), and (0, 6)

4. Find the area of the square whose vertices are (0, -6), (-4, -6), (-4, -1), and (0, -1)

Complete.

5. If the height of a rectangle is 6 3/4 mm and the perimeter is 17 1/10 mm, what is the length of the base of the rectangle?

6. If the base of a rectangle is 2 2/5 cm and the perimeter is 6 3/10 cm, what is the height of the rectangle?

Complete.

7. The perimeter of a rectangle is 92 m. The base is two more than three times the height. What is the length of the base?

8. The area of a rectangle is 56 cm^2. The base is six less than two times the height. What is the length of the base?

Complete.

9. What is the area of a triangle with base 16 cm and height 11 cm?	10. What is the length of the base of a triangle with height 13.1 mm and area 139.515 mm^2?

Find the missing measurement of each trapezoid.

11. *height* = 18 mm b_1 = 14 mm b_2 = 19 mm *area* =	12. *height* = 13 mm b_1 = b_2 = 5 mm *area* = 208 mm^2	13. *height* = 29 mm b_1 = 19 mm b_2 = *area* = 478.5 mm^2

Complete.

14. Find the area of the triangle whose vertices are (-2, 9), (-10, 9), and (-2, 16)	15. Find the area of the triangle whose vertices are (-4, -1), (5, 4), and (5, -1)

Complete.

16. Find the area of the rectangle whose vertices are (2, 3), (6, 3), (2, -2), and (6, -2)	17. Find the area of the rectangle whose vertices are (-7, 0), (-7, 4), (-2, 4), and (-2, 0)

Complete.

18. Find the area of the trapezoid whose vertices are (2, 2), (2, 7), (-9, 2), and (-1, 7)	19. Find the area of the trapezoid whose vertices are (0, 4), (4, 0), (10, 4), and (0, 0)

Complete.

20. What is the length of the base of a triangle with height 7 3/4 cm and area 36 13/16 cm^2?	21. What is the height of a triangle with base 10 mm and area 8 1/3 mm^2?

Find the missing measurement of each trapezoid.

22. *height* = 6 3/4 m b_1 = 3 1/5 m b_2 = 7 2/3 m *area* =	23. *height* = 5 m b_1 = b_2 = 6 1/2 m *area* = 41 1/4 m^2	24. *height* = b_1 = 7 1/2 cm b_2 = 7 cm *area* = 43 1/2 cm^2

Find the missing length for each right triangle. Simplify your answer.

25. a = 16 b = c = $2\sqrt{185}$	26. a = b = 16 c = $2\sqrt{73}$	27. a = 15 b = 10 c =

Find the circumference of each circle. State your answer in terms of π and also round your answer to the nearest tenth.

28. diameter = 10 cm	29. radius = 24.77 mm	30. diameter = $\frac{4}{3}$ mm

Find the area of each circle. State your answer in terms of π and also round your answer to the nearest tenth.

31. diameter = $\frac{2}{7}$ cm	32. radius = 16.14 mm	33. diameter = 34 mm

Find the radius of the circle. (*use $\pi = 3.14$*)

34. C = $\frac{1}{1}\pi$ m	35. C = 77.31 cm	36. A = 657.4096π cm^2

Complete.

37. Find the area of the trapezoid whose vertices are (2, 6), (-2, 2), (4, 2), and (-2, 6)	38. Find the area of the rectangle whose vertices are (3, -8), (-2, -8), (-2, 0), and (3, 0)

Complete.

39. Natalie has designed a small oval racetrack for her remote control car. Her design is shown in the following figure. She has two curves, each of which is half of a circle. She also has two straight-aways that she wants to connect to the circles. The curves are on a radius of nineteen inches and the straight-aways are fifty-nine inches long. What is the total distance around the track? Round your answer to the nearest whole inch.

40. About many times can a piece of wire that is twenty-four centimeters long be wrapped around a wooden dowel that is two-thirds of a centimeter in diameter? Round your answer to the nearest whole number.

Complete.

41. Alexandra has a window cleaning business. She just won a contract to wash the windows on the Zooper building in downtown Mathville. It has one hundred forty-three 2-ft x 6-ft windows. If she can wash the windows at an average rate of 4.5 square feet per minute, how long will it take her to wash the windows on the entire Zooper building?

42. Kevin's pumpkin patch last year was a rectangle that measured forty-three meters long by twenty-one meters wide. This year he increased the area of the pumpkin patch by increasing the length but not the width. He increased the area of the patch by 525 square meters. What is the length of the expanded pumpkin patch?

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