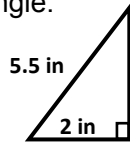


**TMT Formula Finder 20 ACT Prep V2**

1. A planet with a circular path around the sun is 58 million km from the sun. How far does the planet travel in one full orbit?

2. Find the missing leg of the triangle:



3. What is the area of the largest triangle that can be made with an 8.5" x 11" sheet of paper?

4. Cam bikes 14 miles in 4 hours. Ronda bikes 12 miles in 3 hours. Who bikes faster?

5. A rectangular cake is 3 in tall, 10 in wide, and 12 in long. If Leo wants to cover every single surface of the cake with frosting, what is the area he will need to cover?

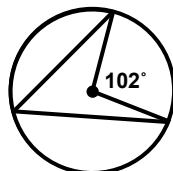
6. What is the area of a trapezoid that has bases of 2 ft and 3 ft and a height of 2 ft?

7. The volume of a cylindrical can is  $150 \text{ cm}^3$ . What is the height if the can's radius is 5 cm?

8. The remains of a cheesecake with a radius of 2.5 in forms an angle of  $230^\circ$ . What is the area of the top of the remaining cheesecake?

9. A local park is located at  $(3, 5)$  and Divya's house is located at  $(12, -10)$ . If Divya's house is the midpoint between the park and Adam's house, where is Adam's house?

10. Find the inscribed angle for the circle shown:

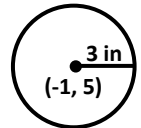


11. A child riding on a merry-go-round chooses a horse 7 feet from the center of the ride. If the child's path so far makes a central angle of  $23^\circ$ , how far has the child traveled?

12. Write the equation for a line with a slope of  $\frac{2}{3}$  that goes through  $(7, -2)$ .

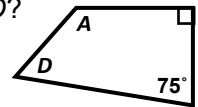
13. Emily knows that  $450^\circ$  is a full circle and a quarter. How much is that in radians?

14. Write the equation for the following circle:



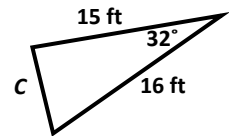
15. Determine the roots of  $y = 4x^2 + 11x - 3$ .

16. What is the sum of  $A$  and  $D$ ?



17. In the standard  $(x, y)$  coordinate plane, Bill's house is at the origin and Jeremiah's house is located at  $(-4, 2.5)$ . How far is it from Bill's house to Jeremiah's?

18. Find side  $C$ :



19. An isosceles triangle has two sides of length 14 cm with an angle of  $108^\circ$  between them. What is the area of the triangle?

20. License plates in City Z have 2 letters, A through Z, followed by 4 numbers, 0 through 9. If letters and numbers can be repeated, how many different license plates can be made?