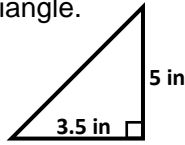Name: _____ Hour: _____

TMT Formula Finder 20 ACT Prep V1

1. Find the area of the right triangle.
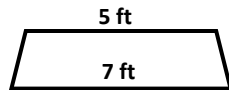
   5 in

   3.5 in

2. A roundabout has a diameter of 10 m. How far would a car travel if it went around the whole roundabout?

3. A box at the post office has dimensions of 2" x 10" x 10". How many square inches of wrapping paper are needed to cover the box?

4. Driving at 30 mph, it takes 30 min to get to school. If Amy drove 5 mph faster, how long would it take her to get to school?

5. A 25-foot ladder is placed so that the top is exactly the height of a tree. If the tree is 24 feet high, how far is the base of the ladder form the tree?
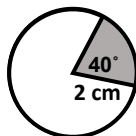
6. What is the height of the following trapezoid if it has an area of 15 ft^2 ?

   5 ft

   7 ft

7. On a standard (x, y) coordinate plane, City A is located at $(2,10)$ and City C is located at $(-3, -2)$. What are the coordinates of City B, located exactly halfway between them?

8. A certain can has a height of 4.5 in and a radius of 2 in. How much liquid can it hold?

9. What is the area of the shaded part of the circle?

   40°

   2 cm

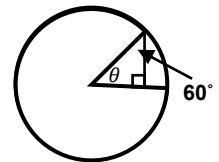10. Describe the line that goes through $(1,5)$ and $(3,13)$.

11. If a circle has an inscribed angle of 40˚, what is the circle's corresponding central angle?

12. A circular field with a radius of 10 yards is divided into slices, one with a central angle of 80˚. If fencing was put around the perimeter of this section, how much would be needed?

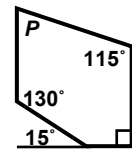13. What are the x-intercepts of the parabola $y = 2x^2 + 3x - 20$?

14. Write the equation of a circle with a radius of 5 cm and a center at $(3,4)$.

15. Find θ in radians:

    θ

    60°

16. In the (x, y) coordinate plane, how far is $A(-5, 2)$ from $B(6, 11)$?

17. Find angle P.

    P

    115°

    130°

    15°

18. A school decides to select 15 random students from a group of 150 seniors to represent the school. How many different groups of students could they select?

19. While building a house of cards, two cards are situated so that their tops form an angle of 145˚. If both cards are 4 in tall, what is the distance between the base of each card?

20. A room with the following floor plan requires carpeting. How many square feet of carpet is required?

    25 m

    23°

    29 m