Just Plane Geometry

There is one kind of person who loves plane geometry. To find out who:

Solve each problem (use \( \pi = 3.14 \)) and find your answers at the bottom of the page. Shade in the letter above each correct answer. When you finish, you will know who loves plane geometry!

1. A. What is the area of the inscribed circle?
   B. What is the area of the shaded region?
   C. What is the circumference of the inscribed circle?

   \[
   \text{1A. } A_{\text{circ}} = \pi r^2 = 3.14 \left( \frac{18}{2} \right)^2 = 259.34 \text{ m}^2
   \]

2. A. What is the area of the large circle?
   B. What is the area of the shaded region?
   C. What is the distance from A to B along the S-shaped curve?
   D. What is the circumference of the large circle?

   \[
   \text{2A. } A_{\text{circle}} = \pi r^2 = 3.14 \left( \frac{9}{2} \right)^2 = 56.52 \text{ m}
   \]

3. If a circle has a circumference of 8.4 cm, what is the diameter of the circle to the nearest 0.1 cm?

   \[
   \text{3. } C = \pi d \\
   d = \frac{C}{\pi} = \frac{8.4}{3.14} = 2.67 \text{ cm}
   \]

4. A. What is the circumference of each small circle?
   B. What is the area of each small circle?
   C. What is the area of the shaded region?

   \[
   \text{4A. } C = 2 \pi r = 2 \pi \left( \frac{3}{2} \right) = 9.42 \text{ cm}
   \]

5. If a circle has a circumference of 14.5 cm, what is the radius of the circle to the nearest 0.1 cm?

   \[
   \text{5. } C = 2 \pi r \\
   r = \frac{C}{2 \pi} = \frac{14.5}{2 \times 3.14} = 2.32 \text{ cm}
   \]

6. A. What is the distance around this track?
   B. What is the area of the shaded region?
   C. What is the area of the complete region inside the track?

   \[
   \text{6. } C = \pi d = \pi \times 105.8 = 331.1 \text{ m}
   \]

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OLD FLAGS HAVE 48 STARS

\[
\begin{array}{ccccccc}
9.174 \text{ m}^2 & 900 \text{ m} & 47.1 \text{ m} & 254.34 \text{ m}^2 & 542.6 \text{ m}^2 & 50.24 \text{ m}^2 & 2.3 \text{ cm} \\
& 2.3 \text{ cm} & 3.5325 \text{ m}^2 & 542.6 \text{ m} & 163.52 \text{ m}^2 & 25.12 \text{ m} & 98.24 \text{ m}^2 \\
& & & & 2826 \text{ m}^2 & 2.7 \text{ cm} & 7065 \text{ m}^2 \\
& & & & & & 69.66 \text{ m}^2 \\
& & & & & & 9.42 \text{ m}
\end{array}
\]