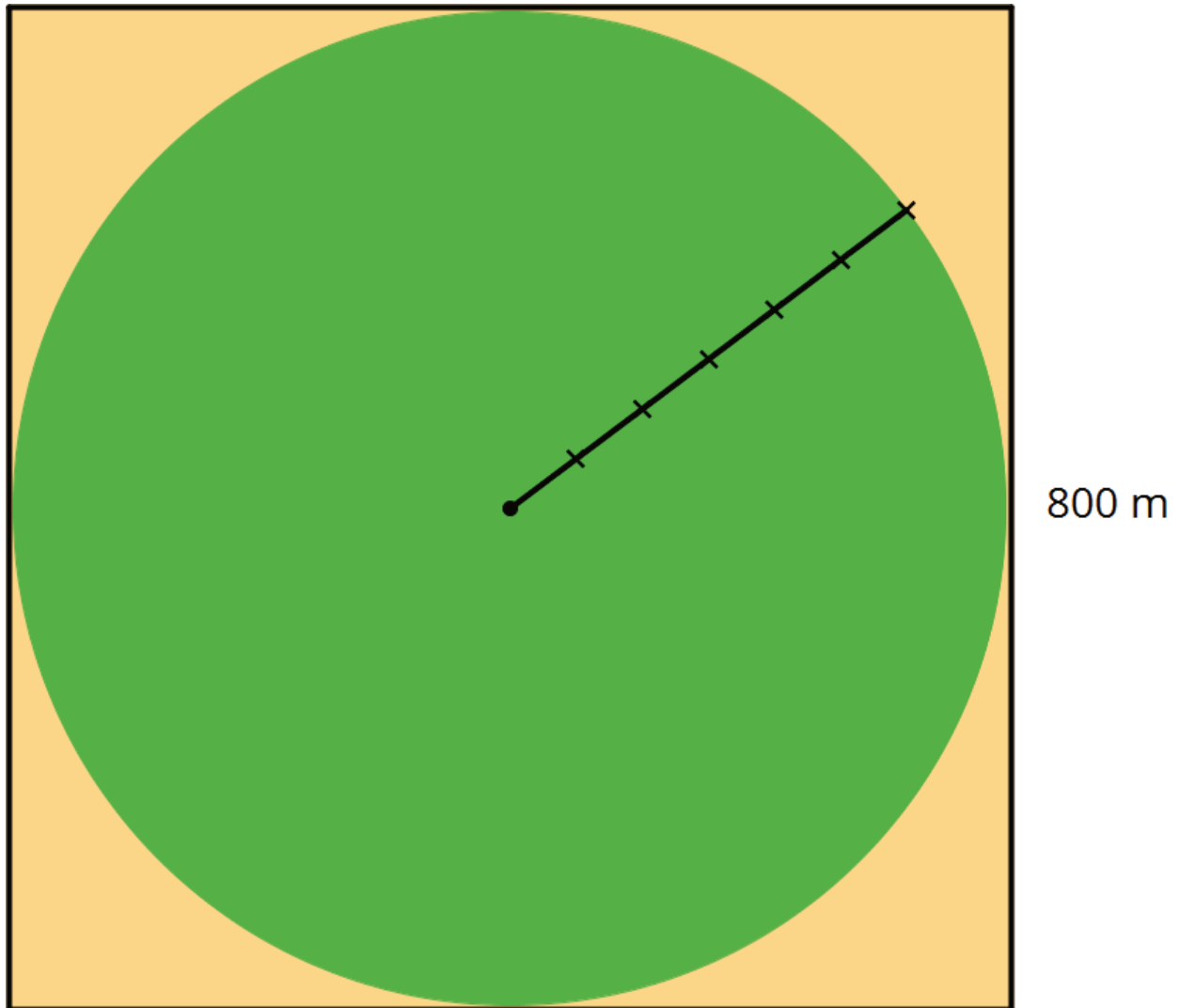


Unit 5 Lesson 16: Applying Area of Circles

1 Still Irrigating the Field (Warm up)

Student Task Statement

The area of this field is about $500,000 \text{ m}^2$. What is the field's area to the nearest square meter?
Assume that the side lengths of the square are exactly 800 m .



- $502,400 \text{ m}^2$
- $502,640 \text{ m}^2$
- $502,655 \text{ m}^2$
- $502,656 \text{ m}^2$

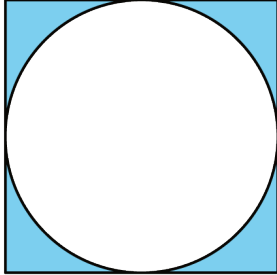
- 502,857 m²

2 Comparing Areas Made of Circles

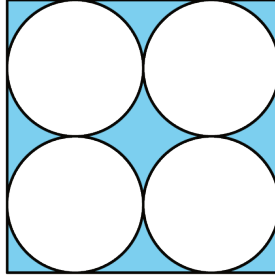
Student Task Statement

1. Each square has a side length of 12 units. Compare the areas of the shaded regions in the 3 figures. Which figure has the largest shaded region? Explain or show your reasoning.

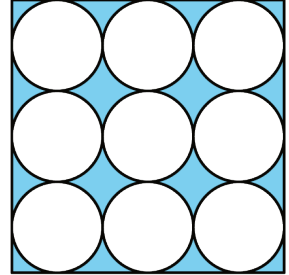
A



B

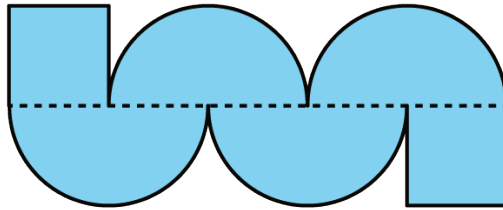


C

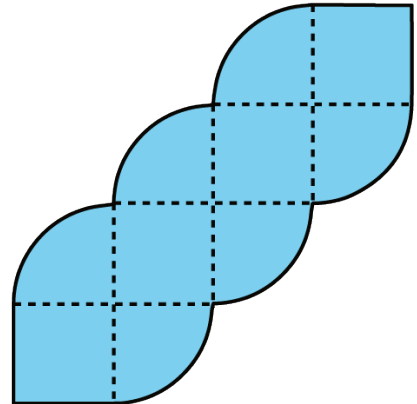


2. Each square in Figures D and E has a side length of 1 unit. Compare the area of the two figures. Which figure has more area? How much more? Explain or show your reasoning.

D

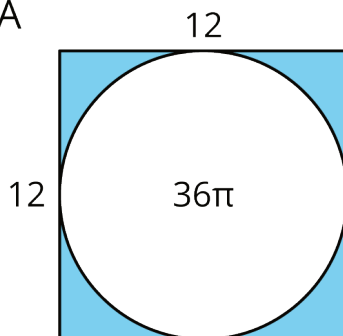


E

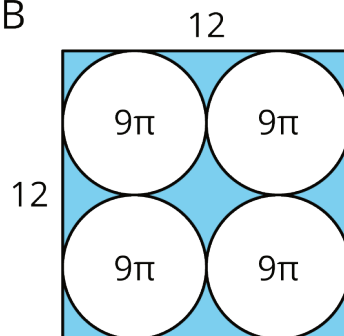


Activity Synthesis

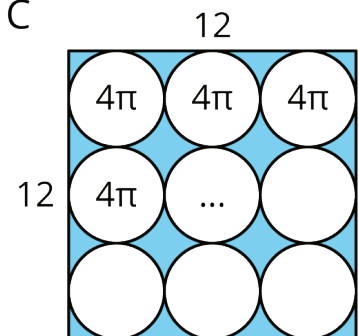
A



B



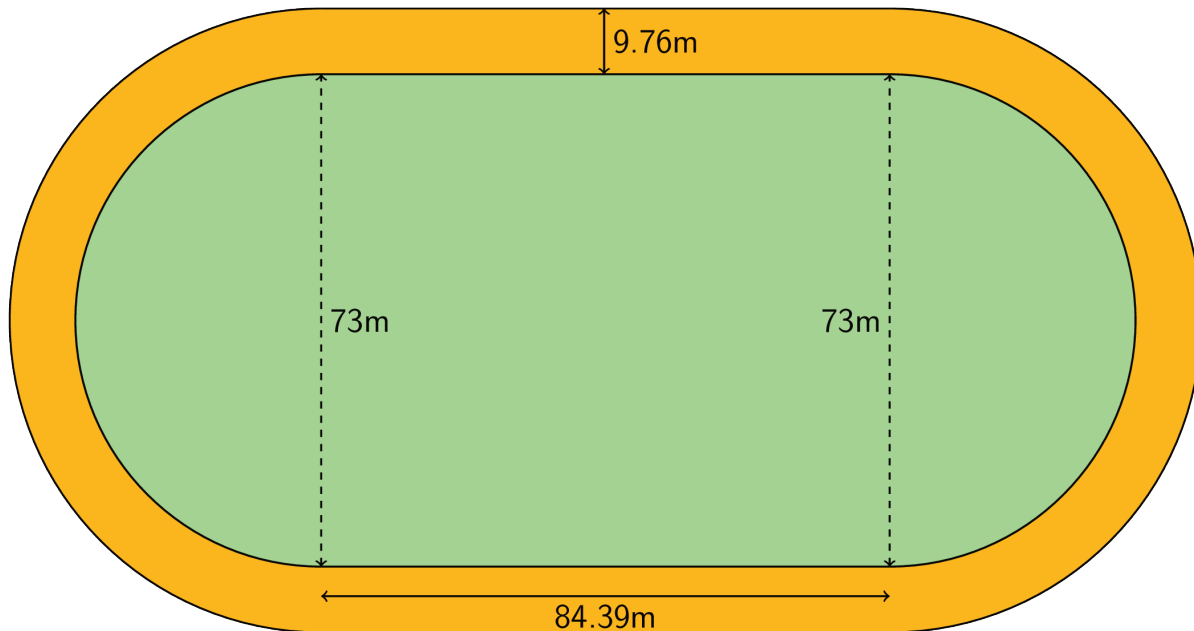
C



3 The Running Track Revisited (Optional)

Student Task Statement

The field inside a running track is made up of a rectangle 84.39 m long and 73 m wide, together with a half-circle at each end. The running lanes are 9.76 m wide all the way around.



What is the area of the running track that goes around the field? Explain or show your reasoning.