

## The JETS Challenge

Provided by Dave Meredith, Associate Professor,  
Penn State University-Fayette

### Challenge 89 – The Uncle Tom’s Cabin Challenge

---

#### Problem:

One hundred and fifty years ago, *Uncle Tom’s Cabin* by Harriet Beecher Stowe was the top selling book of the century, selling 500,000 copies by 1857. Assume each book had 322 pages and each page measured 13 x 20 cm. Arthur Ashe is considered to be one of the top tennis players of all times and the only African American to win the men’s singles at Wimbledon, the U.S. Open, and the Australian Open. He won the Grand Slam in 1968 and again in 1970. Each singles tennis court measures 8.230 m x 23.774 m.

If all the pages of the 500,000 copies were laid edge to edge with no overlapping, the area covered would be equal to how many singles tennis courts?

---

#### Solution:

500,000 copies

- 322 p[ages (161 pieces of paper)
- Each 13 x 20 cm
- $A = .026 \text{ m}^2$

161 papers

$\times 500,000 \text{ copies}$  \_\_\_\_\_

= 80,500,000 papers

$\times .26 \text{ m}^2 \text{ each}$  \_\_\_\_\_

2,093,000  $\text{m}^2$  total area for paper

Tennis court:

8.230 m  $\times$  23.774 m

= 195.66  $\text{m}^2$

# courts covered

= 2,093,000  $\div$  195.66

= 10,697.1 or

10,697 courts