

## Exercise: Sail Area Calculations



Southern Cross 31

Bluewaterboats.org

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### ***Southern Cross 31***

#### Specifications

LOA: 31' 0"

LWL: 25' 0"

Beam: 9' 6"

Draft: 4' 7"

Displacement: 13,600 lbs.

Ballast: 4,400 lbs.

Sail Area: 447 sq. ft.

1. **Sail Area/Displacement Ratio** for the *Southern Cross 31*?

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2. Does she have a *low*, *medium*, or *high* performance SA/Displ ratio?

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**SAIL AREA-DISPLACEMENT RATIO =**

sail area (ft<sup>2</sup>)

\_\_\_\_\_

(displacement/64)<sup>2/3</sup>



## ***J/24***

### Specifications

LOA: 24' 0"

LWL: 20' 0"

Beam: 8' 11"

Draft: 4' 0"

Displacement: 3,100 lbs.

Ballast: 950 lbs.

Sail Area: 261 sq. ft.

3. **Sail Area/Displacement Ratio** for the J/24?

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4. Does she have a *low*, *medium*, or *high performance* SA/Displ ratio?

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**SAIL AREA-DISPLACEMENT RATIO =**

sail area (ft<sup>2</sup>)

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(displacement/64)<sup>2/3</sup>



## ***Farr 40***

### Specifications

LOA: 40.7'

LWL: 35.3'

Beam: 13.2'

Draft: 8.5'

Displacement: 10,902 lbs.

Ballast: 4,960 lbs.

Sail Area: 1,109 sq. ft.

5. **Sail Area/Displacement Ratio** for the *Farr 40*?

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6. Does she have a *low, medium, or high performance SA/Displ* ratio?

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**SAIL AREA-DISPLACEMENT RATIO =**

$\frac{\text{sail area (ft}^2\text{)}}{\text{(displacement/64)}^{2/3}}$