

Condition

A new cruise ship line has just launched 3 new ships. The Pacific Paradise, the Caribbean Paradise, & the Mediterranean Paradise. The Caribbean Paradise has 16 more deluxe staterooms than the Pacific Paradise. The Mediterranean Paradise has 40 fewer deluxe staterooms than 4 times the number of deluxe staterooms on the Pacific Paradise. Find the number of deluxe staterooms for each of the ship if the total number of deluxe staterooms for the 3 ships is 836.

Solution

Let's number of deluxe staterooms on Pacific Paradise (PP) will be X.

Then the number of deluxe staterooms on Caribbean Paradise (CP) will be X+16

Then the number of deluxe staterooms on Mediterranean Paradise (MP) will be 4X-40

And total amount is:

$$X + X + 16 + 4X - 40 = 836$$

$$6X = 860$$

$$X = 143\frac{1}{3}$$

PP contains $143\frac{1}{3}$ deluxe staterooms,

CP contains $159\frac{1}{3}$ deluxe staterooms,

MP contains $4 \cdot 143\frac{1}{3} - 40 = 533\frac{1}{3}$ deluxe staterooms.

Please notice, that the solution is correct, but the values in your conditions are such, that the answers are fractions. Please check it, I think, there is a mistake in your conditions.