Adding and Subtracting Numbers in Scientific Notation with the Same Power

Example 1 Adding and Subtracting Numbers in Scientific Notation with the Different Powers	Ask yourself….
Suppose, at the end of one winter, there are about $1.5 \cdot 10^7$ square kilometers of ice in the Arctic Ocean. By the end of summer, much of the ice has melted, and there are only about $7 \cdot 10^6$ square kilometers of ice. How much ice melted?	*Can I rewrite the problem so the bases have the SAME power of ten?
Example 2 (Very Large Numbers) The approximate area of the Pacific Ocean is $6.4 \cdot 10^7$ square miles. The area of the Arctic Ocean is about $5.4 \cdot 10^6$ square miles. a) Find the approximate sum of the areas of the two oceans.	Ask yourself…. *Can I rewrite the problem so the bases have the SAME power of ten?

Example 2 (continued)	Ask yourself….
The approximate area of the Pacific Ocean is $6.4 \cdot 10^7$ square miles. The area of the Arctic Ocean is about $5.4 \cdot 10^6$ square miles.	*Can I rewrite the problem so the bases have the SAME power of ten?
b) About how much larger is the area of the Pacific Ocean than the area of the Arctic Ocean?	

Example 3 (Very Small Numbers)	Ask yourself….
	*Can I rewrite the problem so the bases have the SAME power of ten?
A standard CD is about $1.2 \cdot 10^{-3}$ meter thick. A thin coating on the CD is approximately $7.0 \cdot 10^{-8}$ meter thick.	
a) How thick is the CD with the coating added?	
b) How much thicker is the CD than the coating?	

Adding and Subtracting Numbers in Scientific Notation with the Same Power