

## SPS Problem of the Week 11/21/2020-11/28/2020

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**Problem 1.** Since last week was a bit harder than usual, we will have an easier more approachable problem this time. Keep in mind, this is still not an *easy* problem.

Start with the set  $\{3, 4, 12\}$ . You are then allowed to replace any two numbers  $\mathbf{a}$  and  $\mathbf{b}$  with the new pair  $0.6\mathbf{a} - 0.8\mathbf{b}$  and  $0.8\mathbf{a} + 0.6\mathbf{b}$ . Can you transform the original set into  $\{4, 6, 12\}$ .