

Puzzle of the Week

Pan Balance With Weights – 2

A pan balance tells you when its two sides are carrying the same amount of weight or whether one side is heavier than the other.

THE CHALLENGE: You have a very large collection of 6-ounce and 10-ounce weights to use on one side of a pan balance. By using two 6-ounce weights, you can measure a 12-ounce item. Which weights can you weigh exactly and which ones can't you weigh exactly?



EXPLORATION: How do your results change if you have 6- and 9-ounce weights? How about other pairs of weights that have a common divisor larger than 1? How do your results compare to the ones you got in “Pan Balance With Weights - 1”? Can you make use of that earlier work to save you reinventing things for this problem?