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# Warm-Up: A Familiar Concept

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**Problem 1:**

Let  $v = [-5, -2, 0, 1, 4, 1000]$ . Find all  $x$  that minimize the following metric:

$$\sum_{\forall i} |v_i - x| = |v_1 - x| + |v_2 - x| + \dots + |v_6 - x|$$

**Problem 2:**

Let  $v = [-5, -2, 0, 1, 4, 1000, 1001]$ . Find all  $x$  that minimize the metric in the previous problem.

**Problem 3:**

What is this metric usually called?