

Inner Equality



The four numbers a, b, c, d lie between -5 and 5 . They are constrained so that

$$5 < a + b < 10 \quad \text{and} \quad -10 < c + d < -5.$$

What can you deduce about these inequalities?

$$\square < a + b - c - d < \square$$

$$\square < a - c < \square$$

$$\square < a - c + d - b < \square$$

$$\square < abcd < \square$$

$$\square < \frac{|a| + |c|}{2} - \sqrt{|ac|} < \square$$

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<http://nrich.maths.org>