

Add 15 to all parts: $-5 + 15 < -5k - 15 + 15 < 20 + 15$

Simplify to: $10 < -5k < 35$

Divide all parts by -5 , and reverse the inequality signs.

$$\frac{10}{-5} > \frac{-5k}{-5} > \frac{35}{-5}$$

so $-2 > k > -7$

or $-7 < k < -2$