Inequality

For a and b are real number

Multiplication Properties of Inequality for c is positive number, i.e. c > 0:
If a < b, then a * c < b * c
If a > b, then a * c > b * c

Multiplication Properties of Inequality for c is negative, i.e. c < 0:
If a > b, then a * c < b * c
If a < b, then a * c > b * c

Multiplication Properties of Inequality for c is zero, i.e. c = 0:
If a > b, then a * c = b * c = 0
If a < b, then a * c = b * c = 0

Division Properties of Inequality for c is positive number, i.e. c > 0:
If a < b, then a / c < b / c
If a > b, then a / c > b / c

Division Properties of Inequality for c is negative, i.e. c < 0:
If a > b, then a / c < b / c
If a < b, then a / c > b / c

How about c = 0?

Example:
3 < 5
3 * 4 < 5 * 4
12 < 20

5 > -3
5 * 2 > 3 * 2
10 > 6

3 < 5
3 * -2 > 5 * -2
-6 > -10

5 > - 3
5 * - 4 < -3 * -4
-20 < 12

$3 < 5$
$3/2 < 5/2$
$1.5 < 2.5$

$5 > -3$
$5/2 > -3/2$
$2.5 > -1.5$

$3 < 5$
$3 / -2 > 5 / -2$
$-1.5 > -2.5$

$5 > -3$
$5 / -2 < -3 / -2$
$-2.5 < 1.5$