

Chapter 10

Inequalities



Fig. 10-1: Number line with centre zero illustrated.

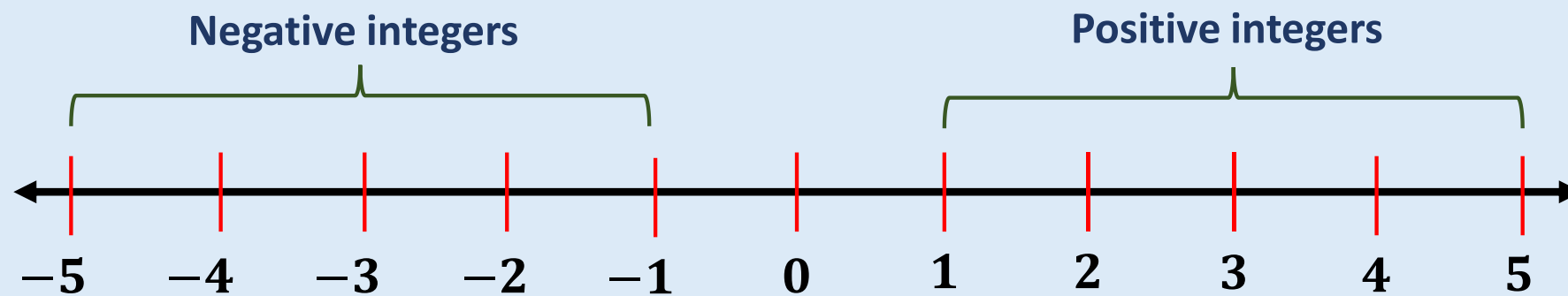


Fig. 10-2: Inequalities shown on number lines: (a) x is greater than zero, (b) x is less than or equal to -1 , (c) x is a number between -1 (excluded) and 2 (included), and (d) x is a number between -2 (included) and 1 (included).

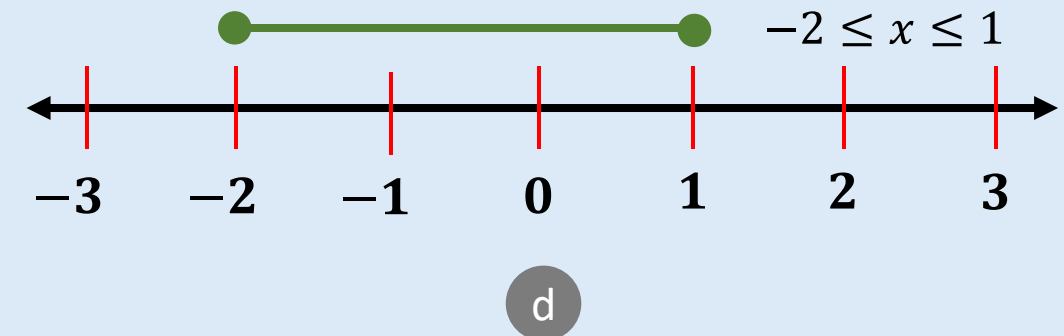
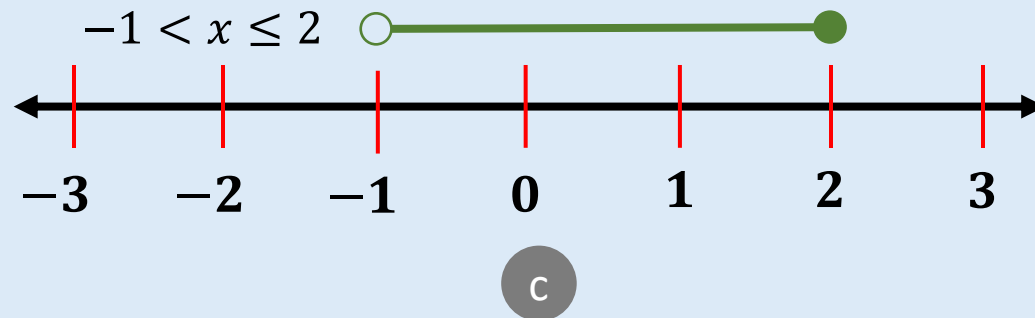
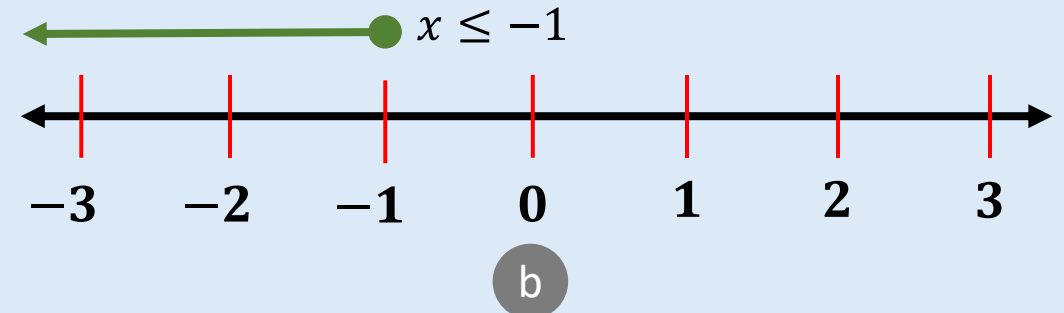
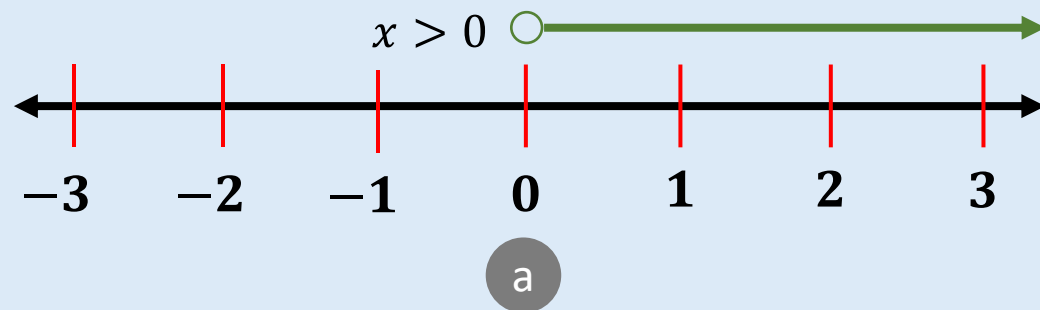


Fig. 10-3: Solution to Example 4(a).

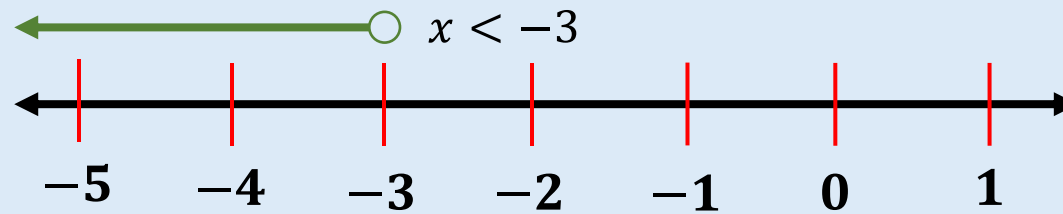


Fig. 10-4: Solution to Example 4(b).

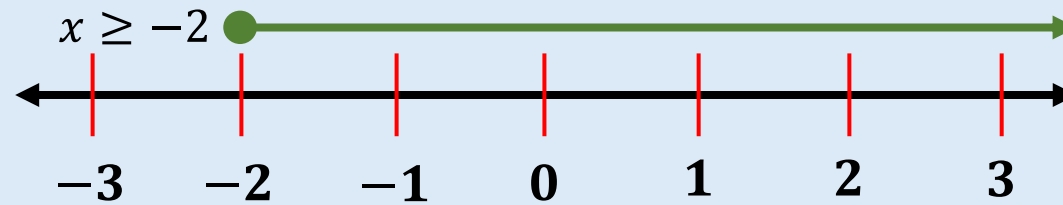


Fig. 10-5: Solution to Example 4(c).

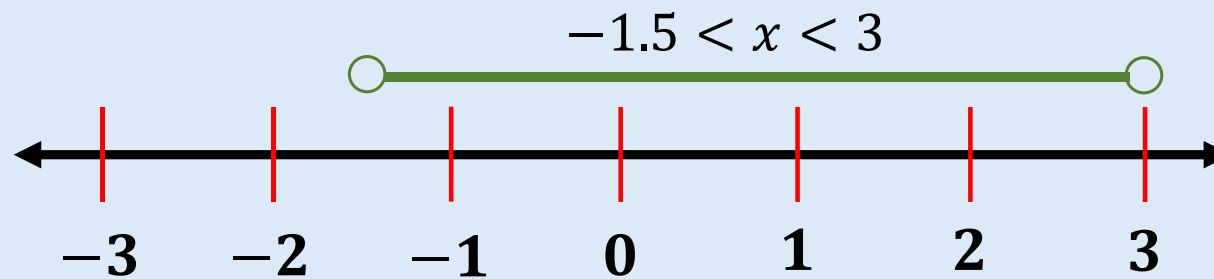


Fig. 10-6: Solution to Example 4(d).

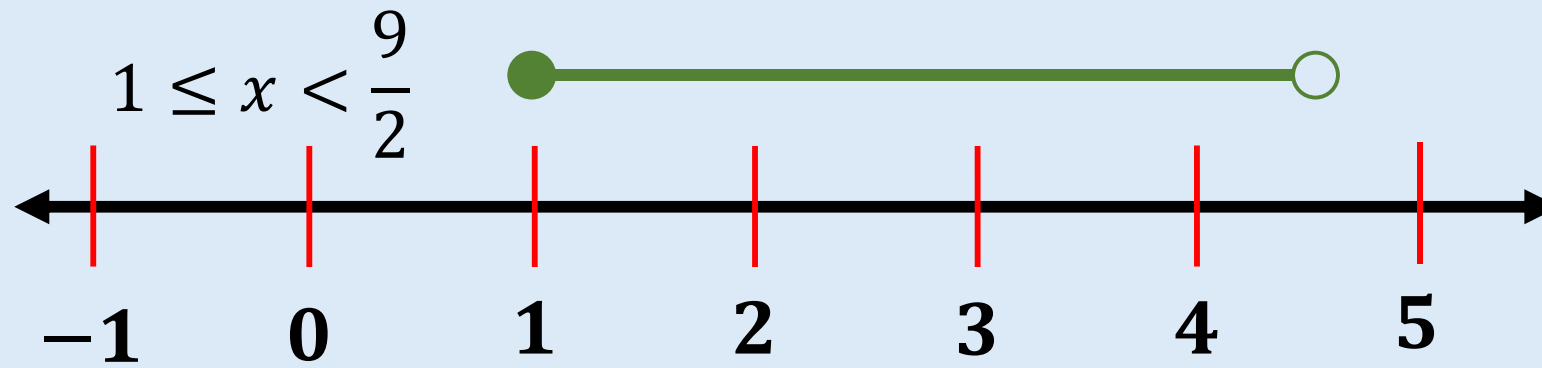


Fig. 10-7: Solution to Example 4(e).

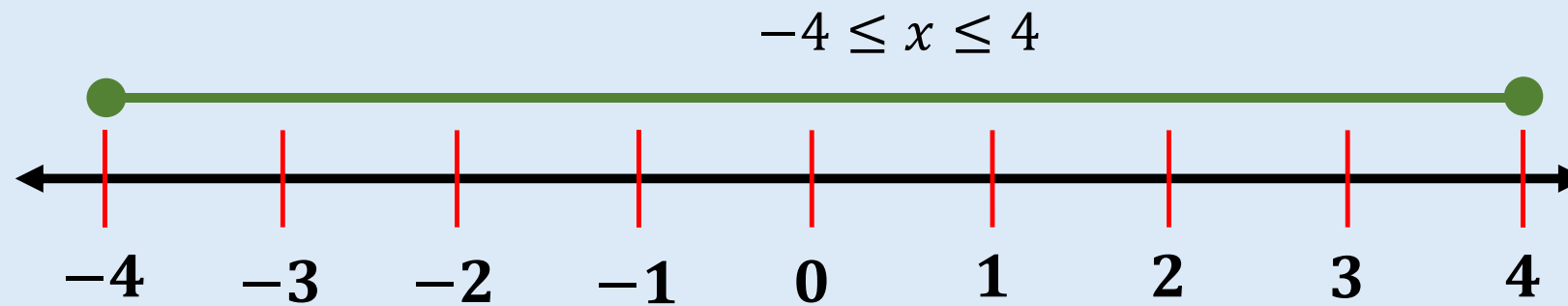


Fig. 10-8: Solution to Example 4(f).

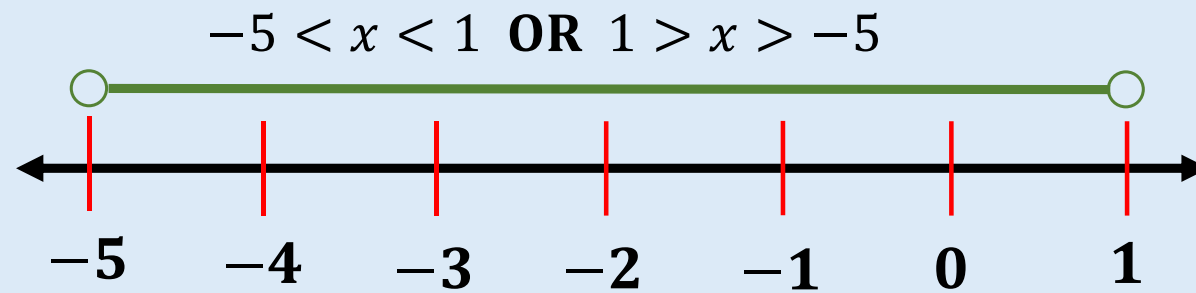


Fig. 10-9: Solution to Example 6 – Method 1.

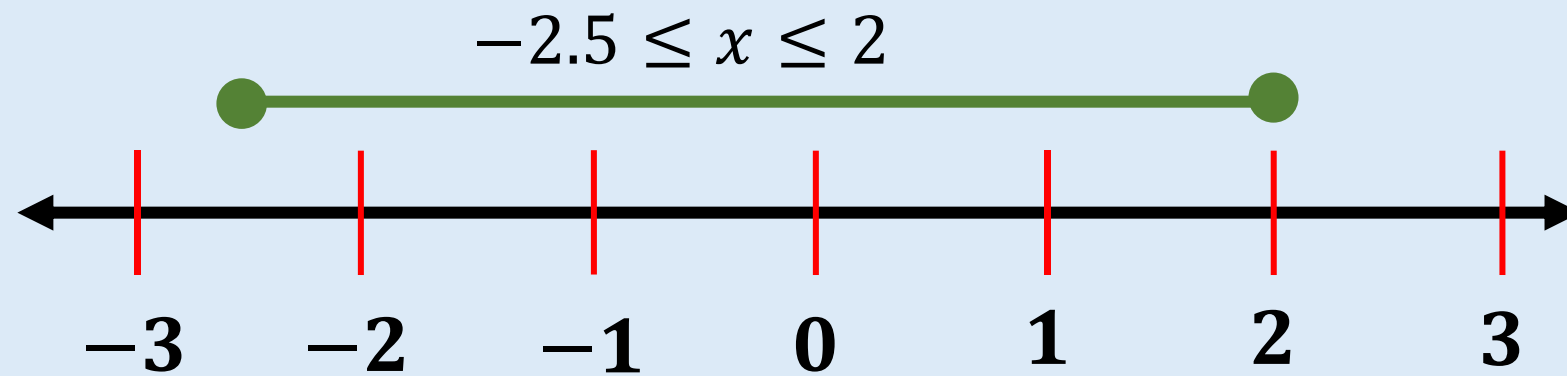


Fig. 10-10: Solution to Example 6 – Method 2.

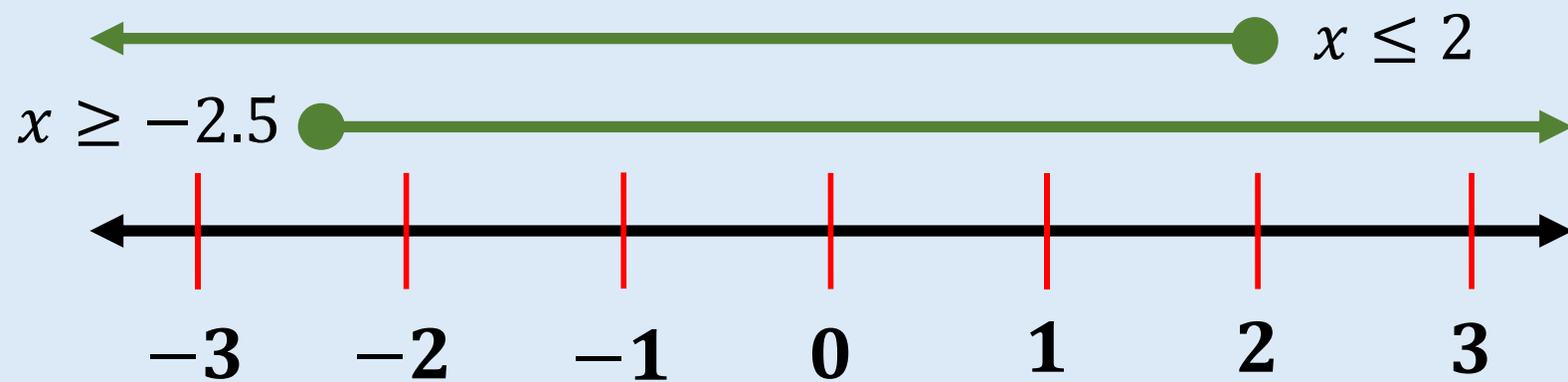


Fig. 10-11: Solution to Example 7(a) – Part I.

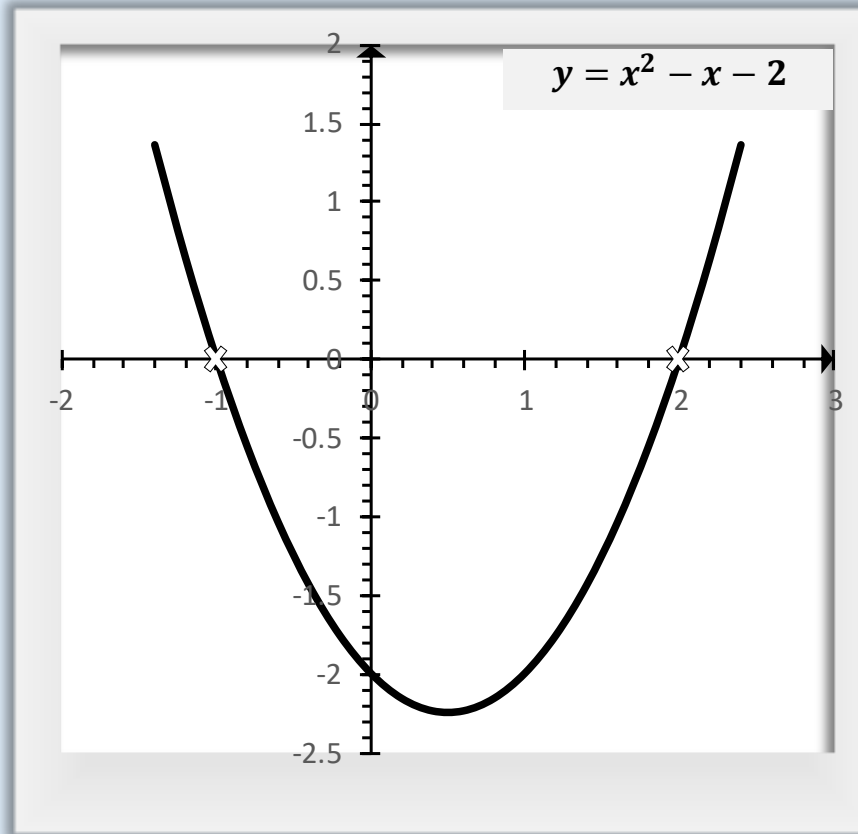


Fig. 10-12: Solution to Example 7(a) – Part II.

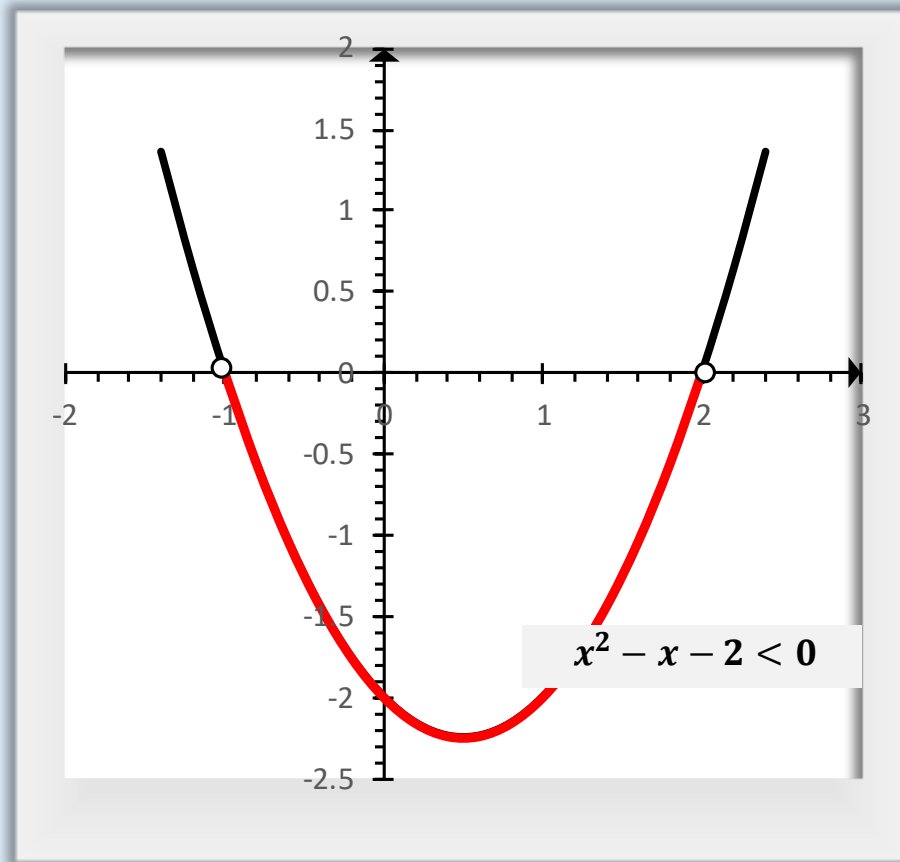


Fig. 10-13: Solution to Example 7(b) – Method 1, Part I.

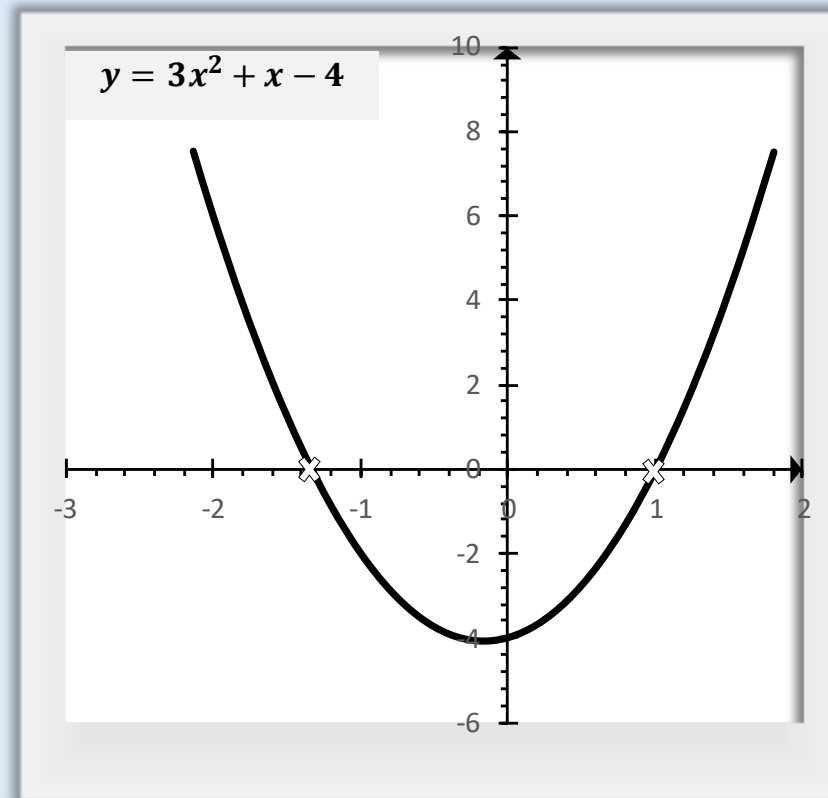


Fig. 10-14: Solution to Example 7(b) – Method 1, Part II.

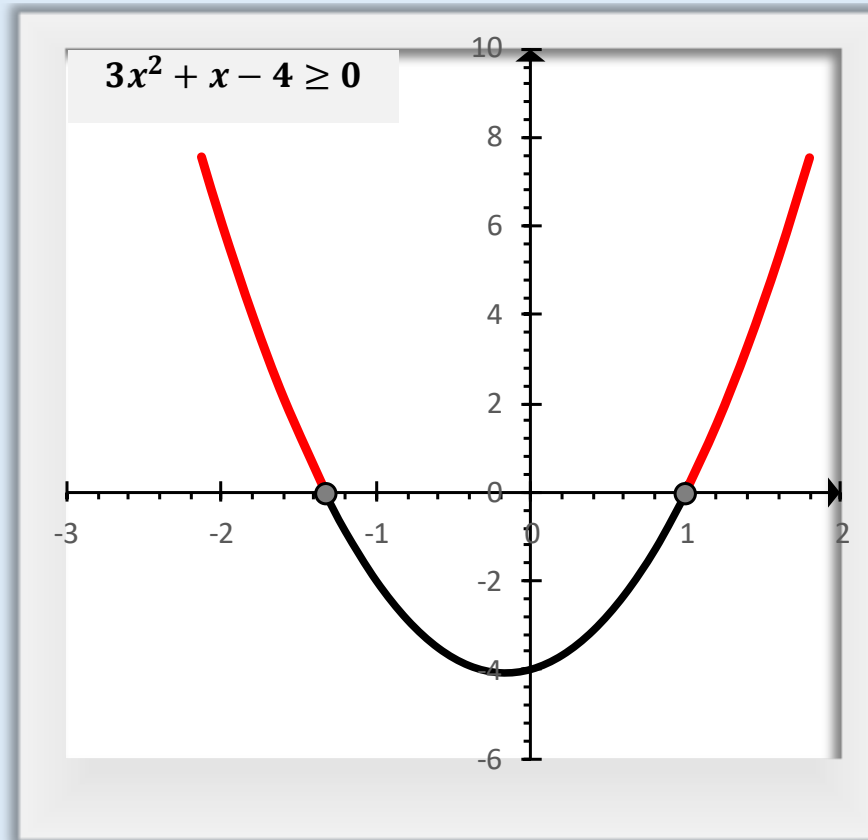


Fig. 10-15: Solution to Example 7(b) – Method 2, Part I.

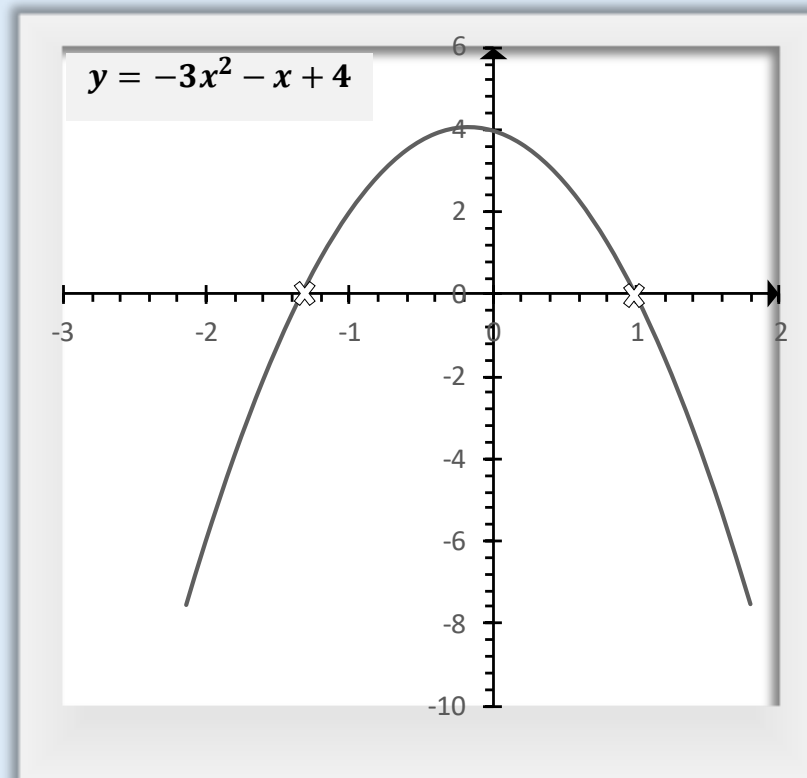


Fig. 10-16: Solution to Example 7(a) – Method 2, Part II.

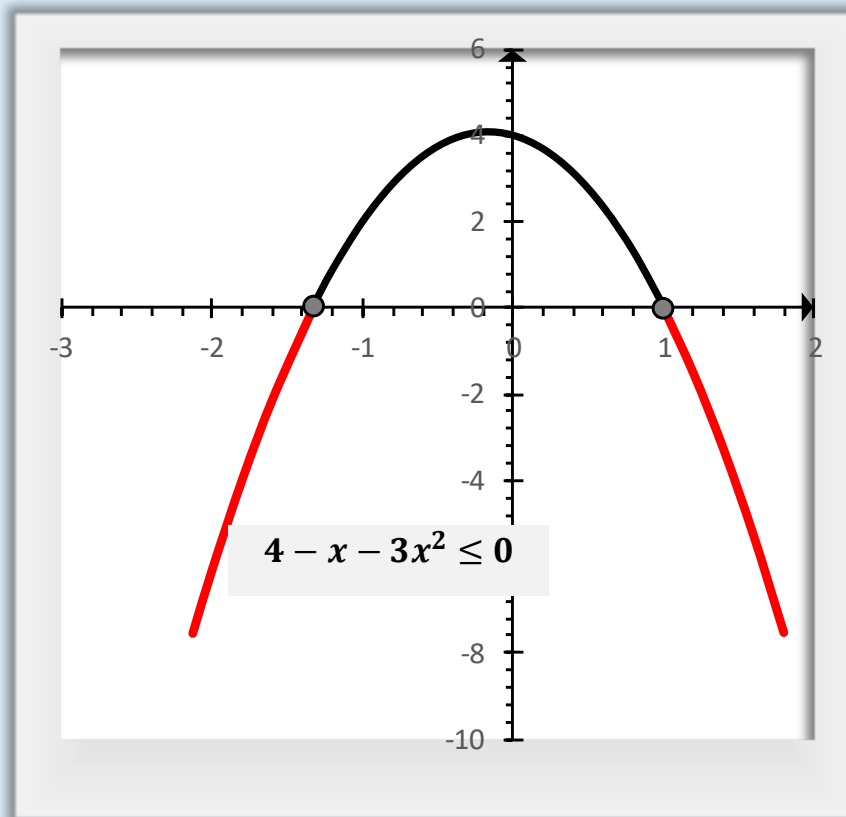


Fig. 10-17: Author's method illustrated for: (a) $ax^2 + bx + c > 0$, (b) $ax^2 + bx + c < 0$, (c) $-ax^2 + bx + c > 0$, and (d) $-ax^2 + bx + c < 0$.

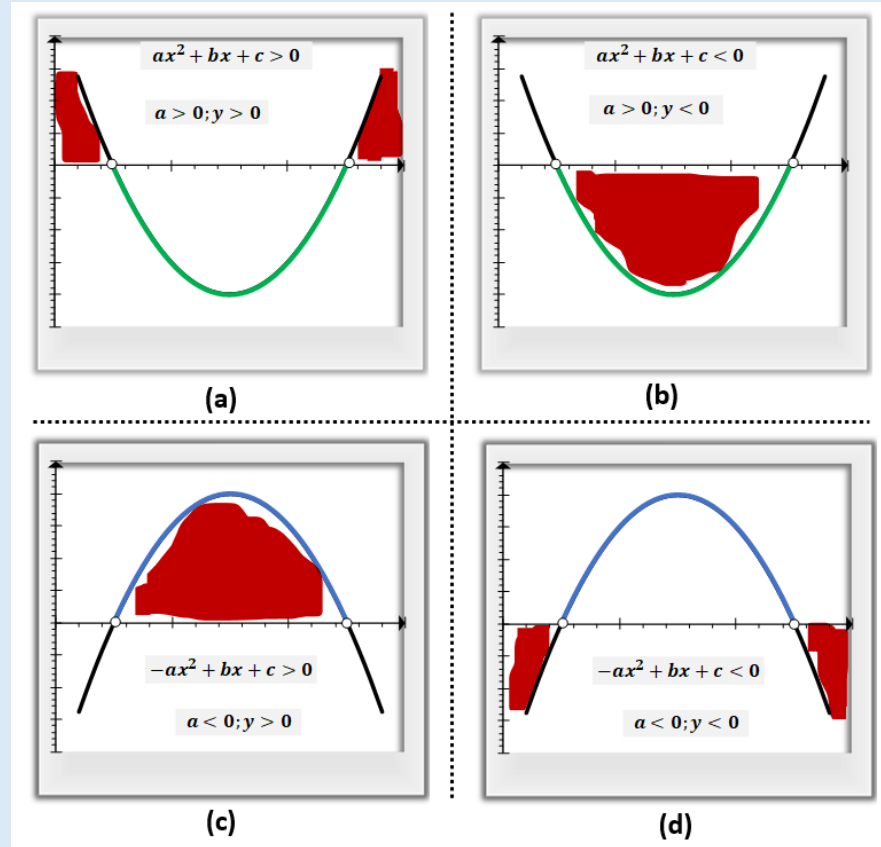


Fig. 10-18: Solution to Example 12(a).

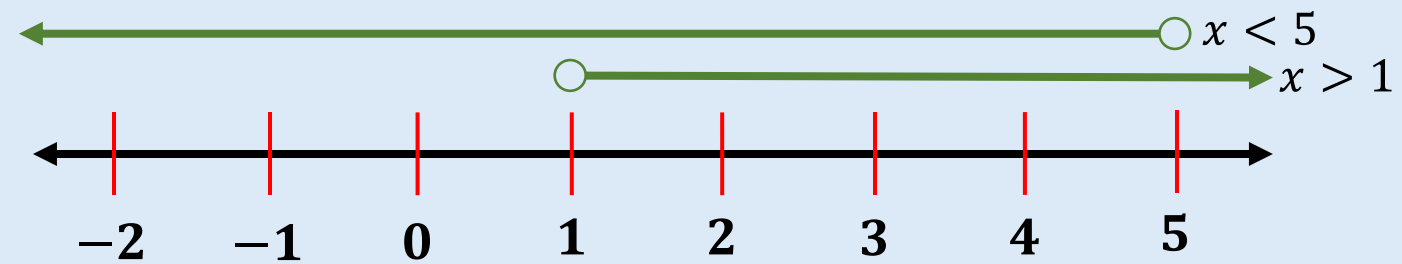


Fig. 10-19: Solution to Example 12(b).

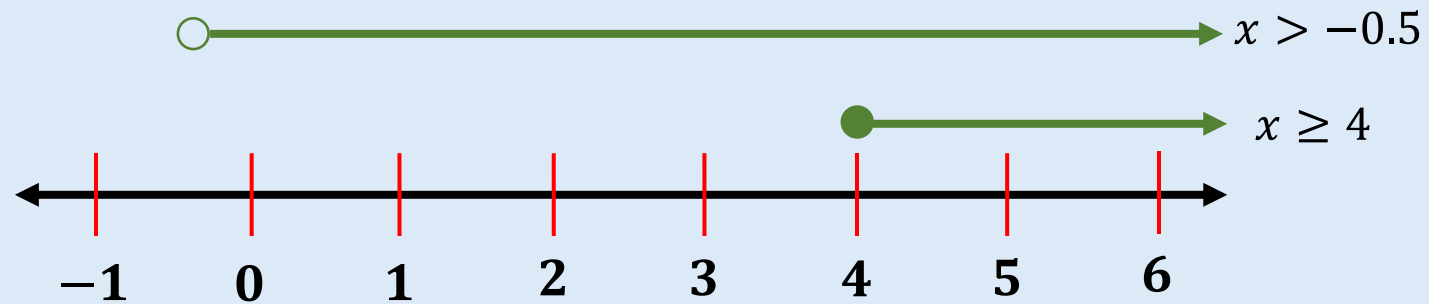


Fig. 10-20: Solution to Example 12(c).

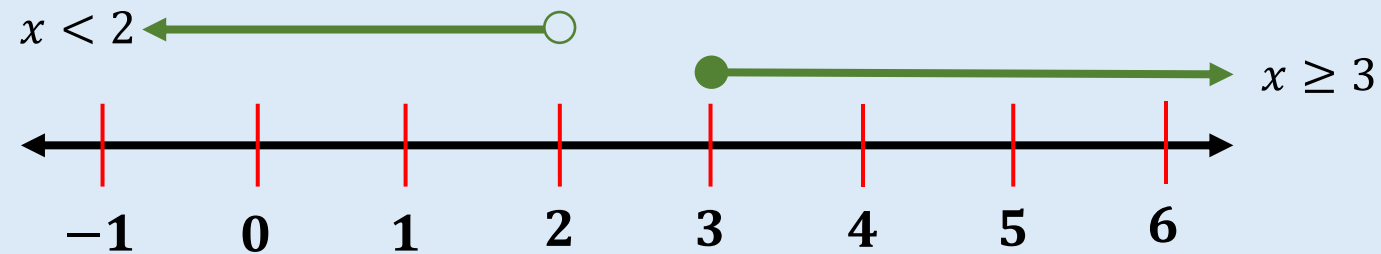


Fig. 10-21: Solution to Example 12(d).

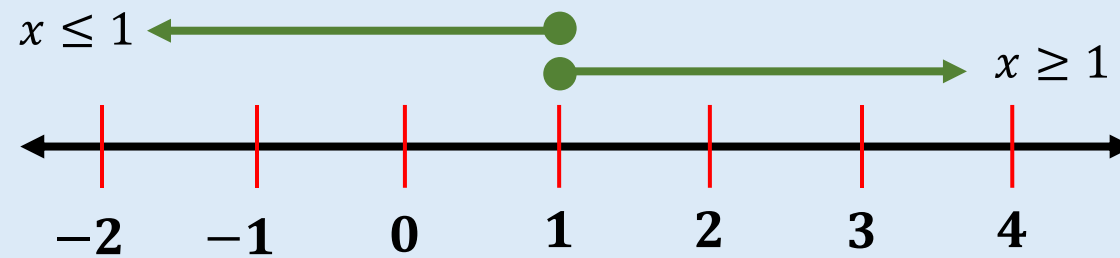


Fig. 10-22: Solution to Example 13(b).

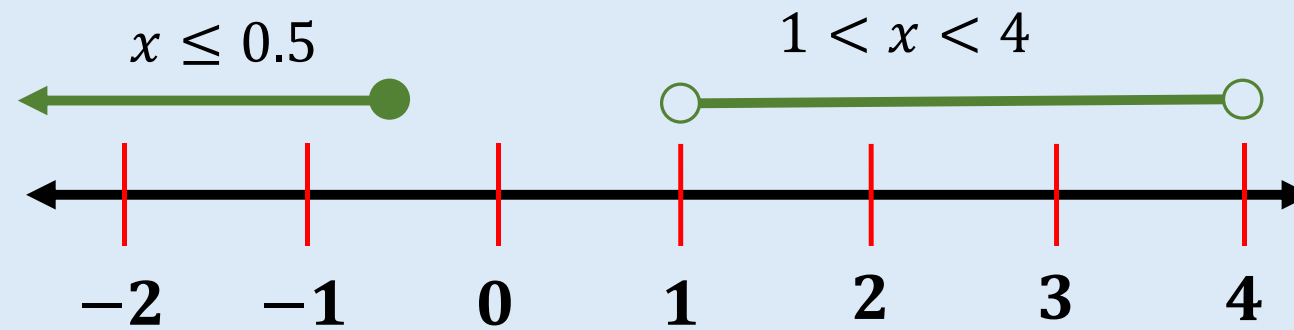


Fig. 10-23: Inequalities involving modulus for the four inequality symbols illustrated: (a) $|x| < 3$, (b) $|x| > 4$, (c) $|x| \leq 5$, and (d) $|x| \geq 6$.

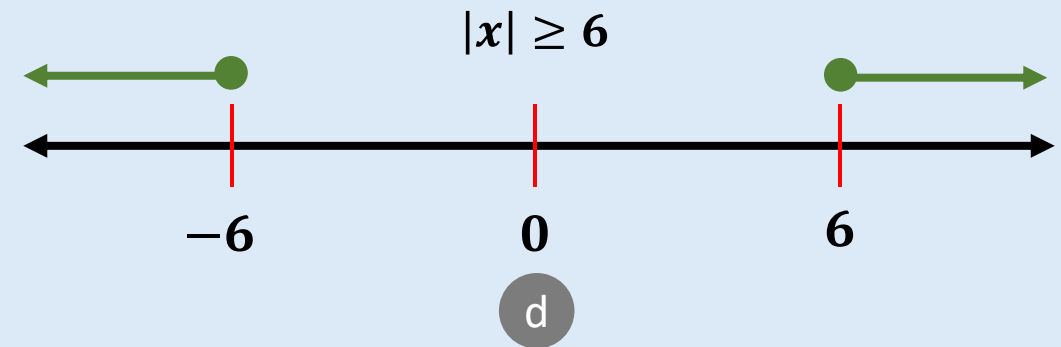
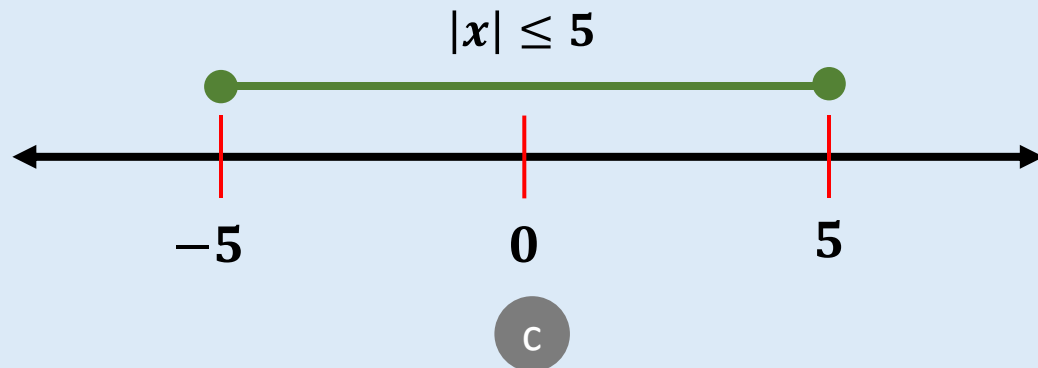
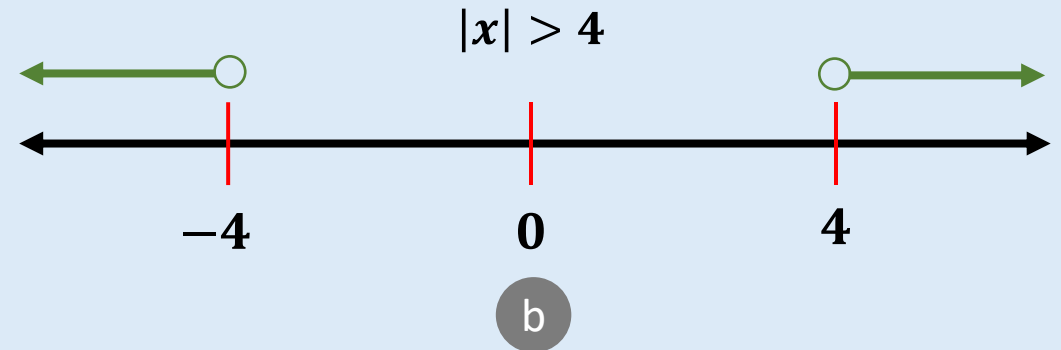
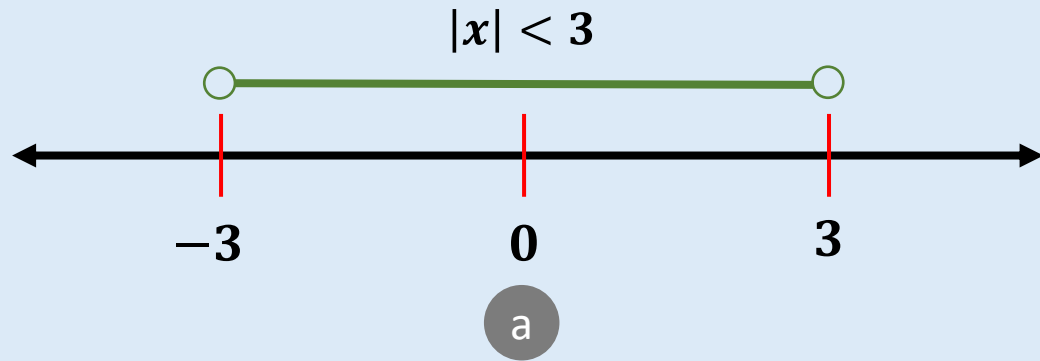
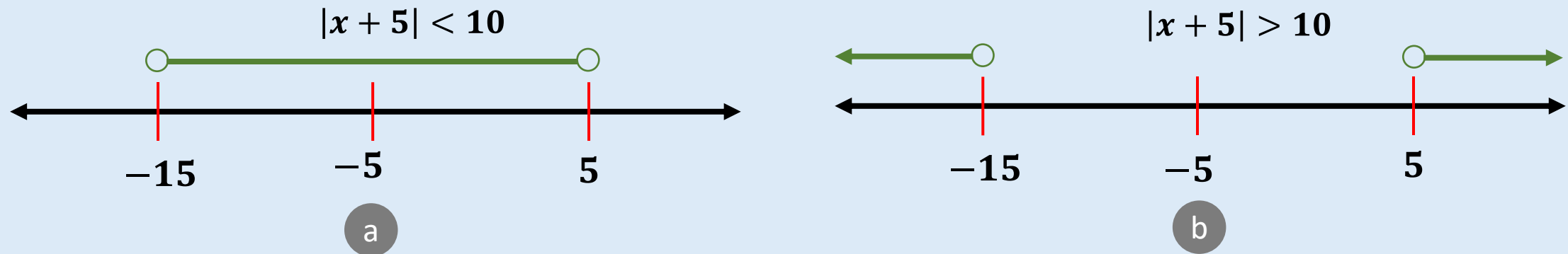


Fig. 10-24: Inequalities involving modulus with reference other than the origin zero illustrated: (a) $|x + 5| < 10$ and (b) $|x + 5| > 10$.



Thank You

