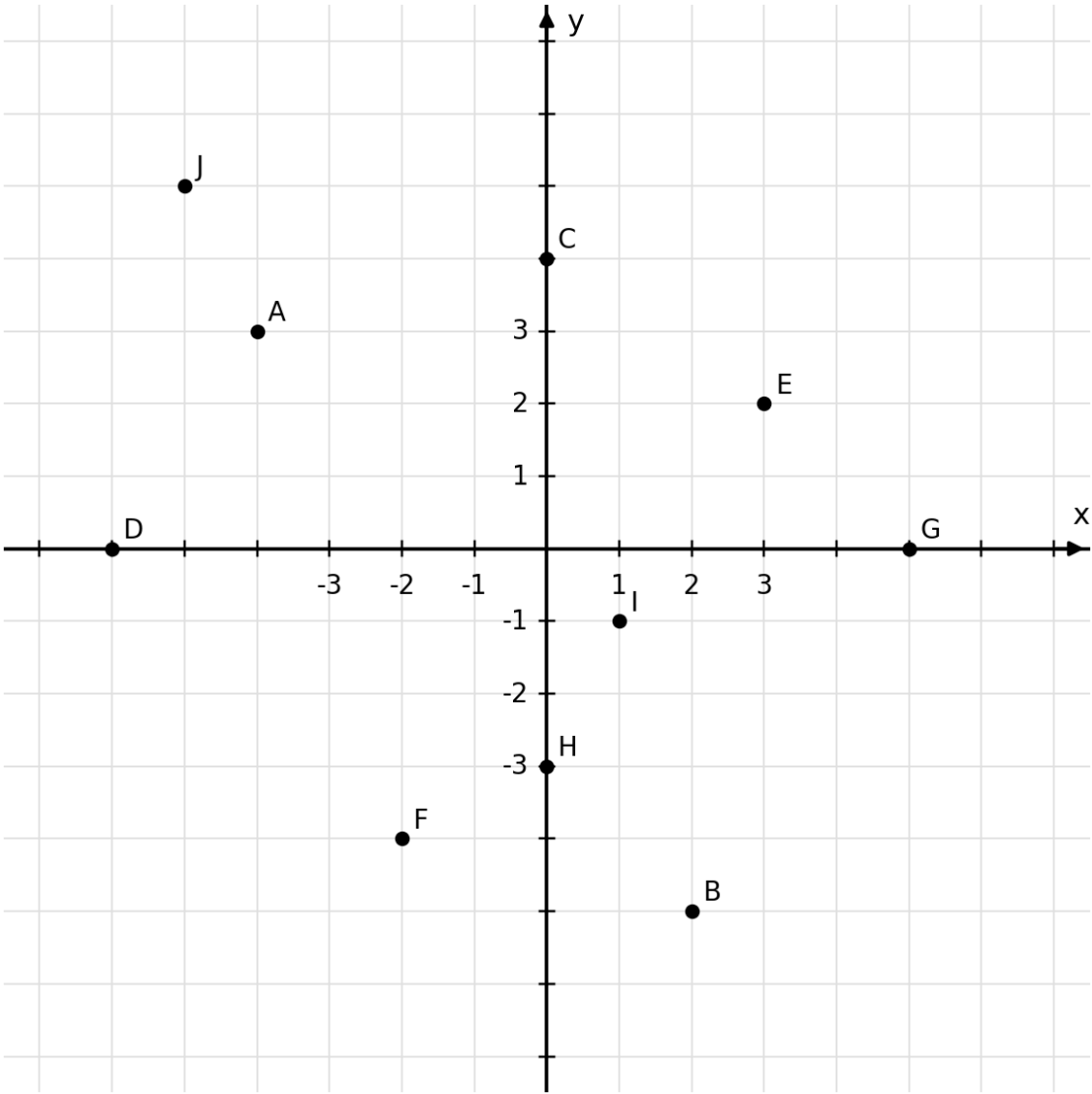


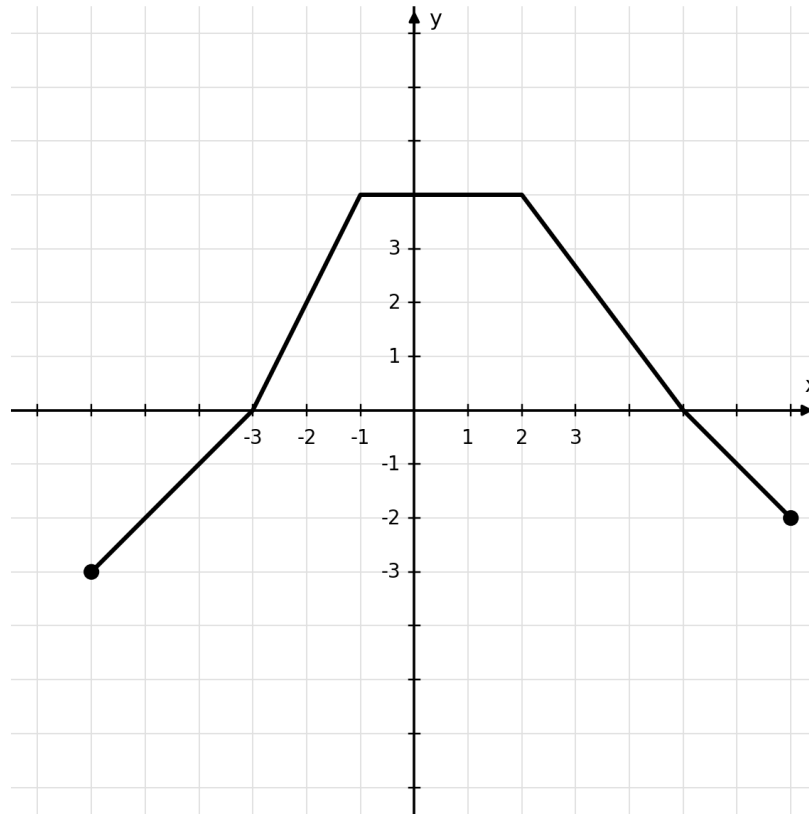
Coordinate System and Nine Key Features - Answer Key

1.



2.

a.



Domain: $[-6, 7)$

Range: $[-3, 4)$

Increasing: $(-6, -1)$

Decreasing: $(2, 7)$

Constant: $(-1, 2)$

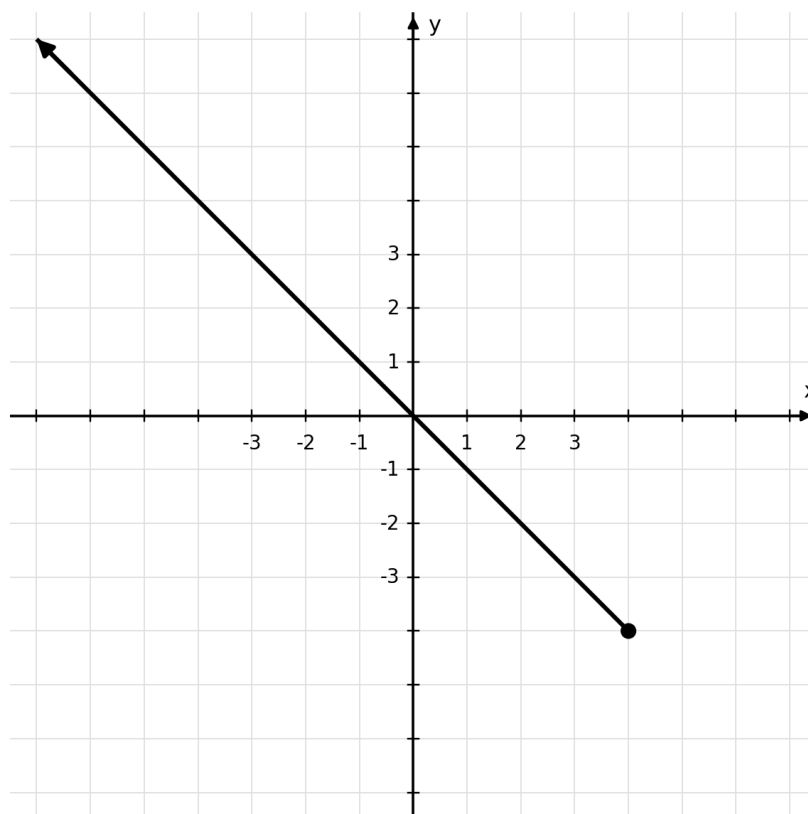
x-intercepts: $(-3, 0), (5, 0)$

y-intercept: $(0, 4)$

Absolute maximum value and where it occurs: 4; occurs for $-1 \leq x \leq 2$

Absolute minimum value and where it occurs: -3; occurs at $x = -6$

b.



Domain: $(-\infty, 4)$

Range: $[-4, \infty)$

Increasing: none

Decreasing: $(-\infty, 4)$

Constant: none

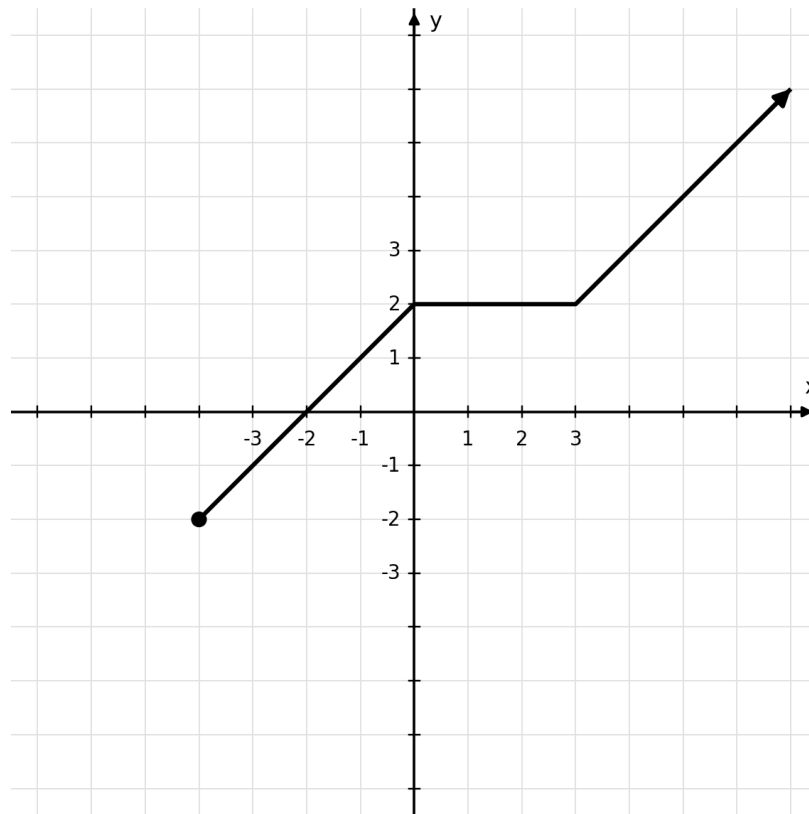
x-intercepts: $(0,0)$

y-intercept: $(0,0)$

Absolute maximum value and where it occurs: none

Absolute minimum value and where it occurs: -4 ; occurs at $x=4$

c.



Domain: $[-4, \infty)$

Range: $[-2, \infty)$

Increasing: $(-4, 0) \cup (3, \infty)$

Decreasing: none

Constant: $(0, 3)$

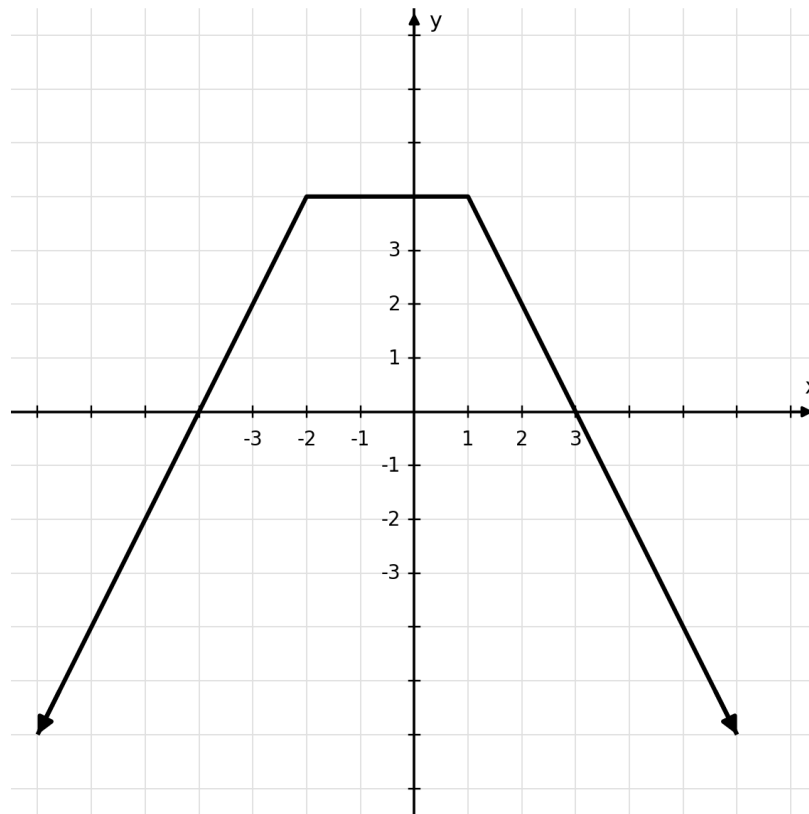
x-intercepts: $(-2, 0)$

y-intercept: $(0, 2)$

Absolute maximum value and where it occurs: none

Absolute minimum value and where it occurs: -2 ; occurs at $x = -4$

d.



Domain: $(-\infty, \infty)$

Range: $(-\infty, 4)$

Increasing: $(-\infty, -2)$

Decreasing: $(1, \infty)$

Constant: $(-2, 1)$

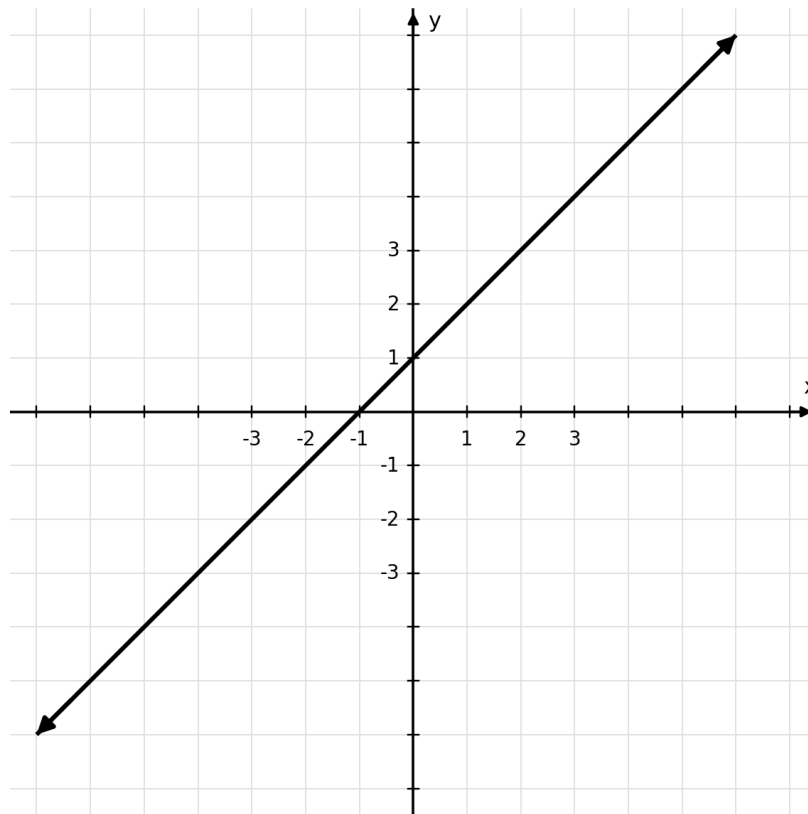
x-intercepts: $(-4, 0), (3, 0)$

y-intercept: $(0, 4)$

Absolute maximum value and where it occurs: 4; occurs for $-2 \leq x \leq 1$

Absolute minimum value and where it occurs: none

e.



Domain: $(-\infty, \infty)$

Range: $(-\infty, \infty)$

Increasing: $(-\infty, \infty)$

Decreasing: none

Constant: none

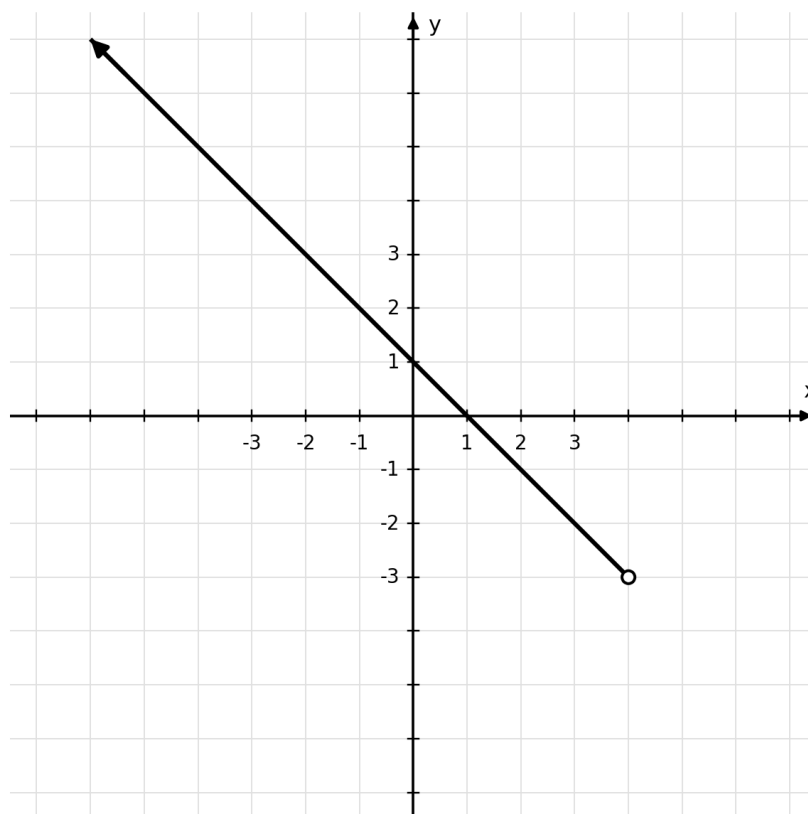
x-intercepts: $(-1, 0)$

y-intercept: $(0, 1)$

Absolute maximum value and where it occurs: none

Absolute minimum value and where it occurs: none

f.



Domain: $(-\infty, 4)$

Range: $(-3, \infty)$

Increasing: none

Decreasing: $(-\infty, 4)$

Constant: none

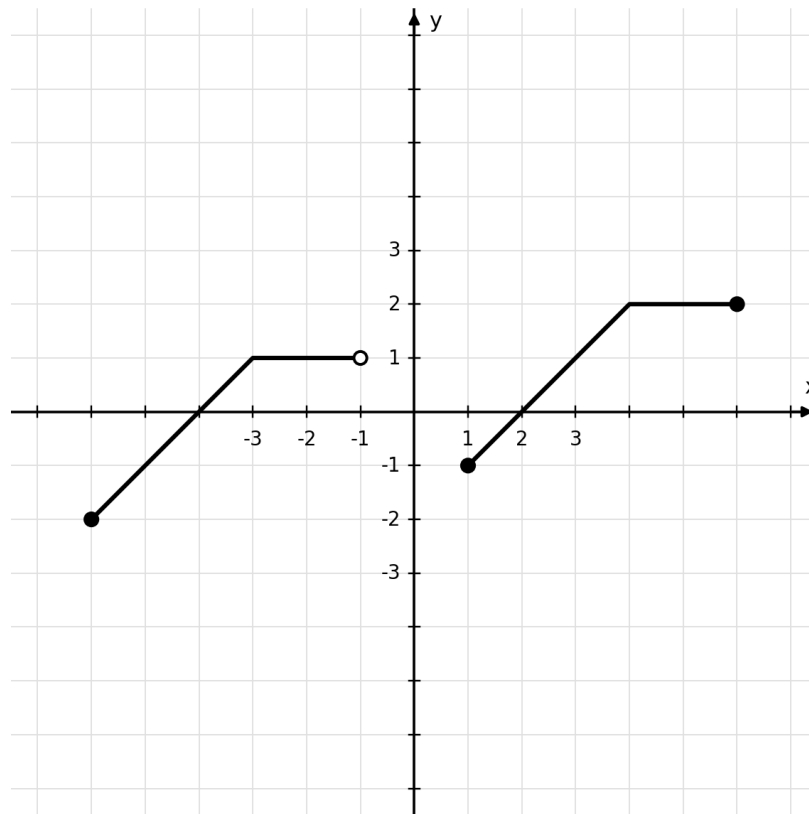
x-intercepts: $(1, 0)$

y-intercept: $(0, 1)$

Absolute maximum value and where it occurs: none

Absolute minimum value and where it occurs: none

g.



Domain: $[-6, -1) \cup [1, 6)$

Range: $[-2, 2)$

Increasing: $(-6, -3) \cup (1, 4)$

Decreasing: none

Constant: $(-3, -1) \cup (4, 6)$

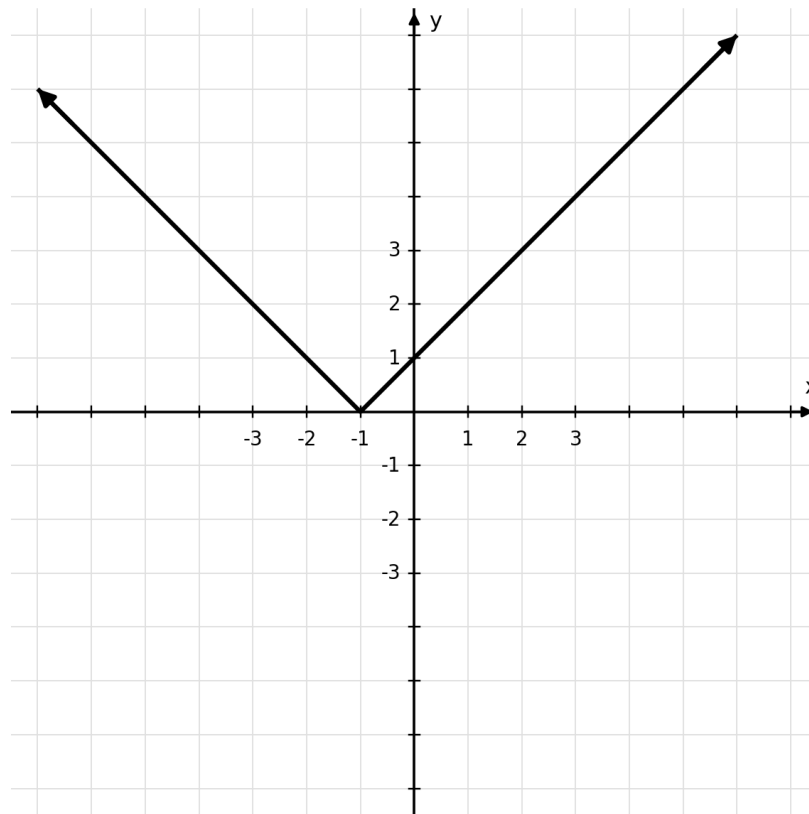
x-intercepts: $(-4, 0), (2, 0)$

y-intercept: none

Absolute maximum value and where it occurs: 2; occurs for $4 \leq x \leq 6$

Absolute minimum value and where it occurs: -2; occurs at $x = -6$

h.



Domain: $(-\infty, \infty)$

Range: $[0, \infty)$

Increasing: $(-1, \infty)$

Decreasing: $(-\infty, -1)$

Constant: none

x-intercepts: $(-1, 0)$

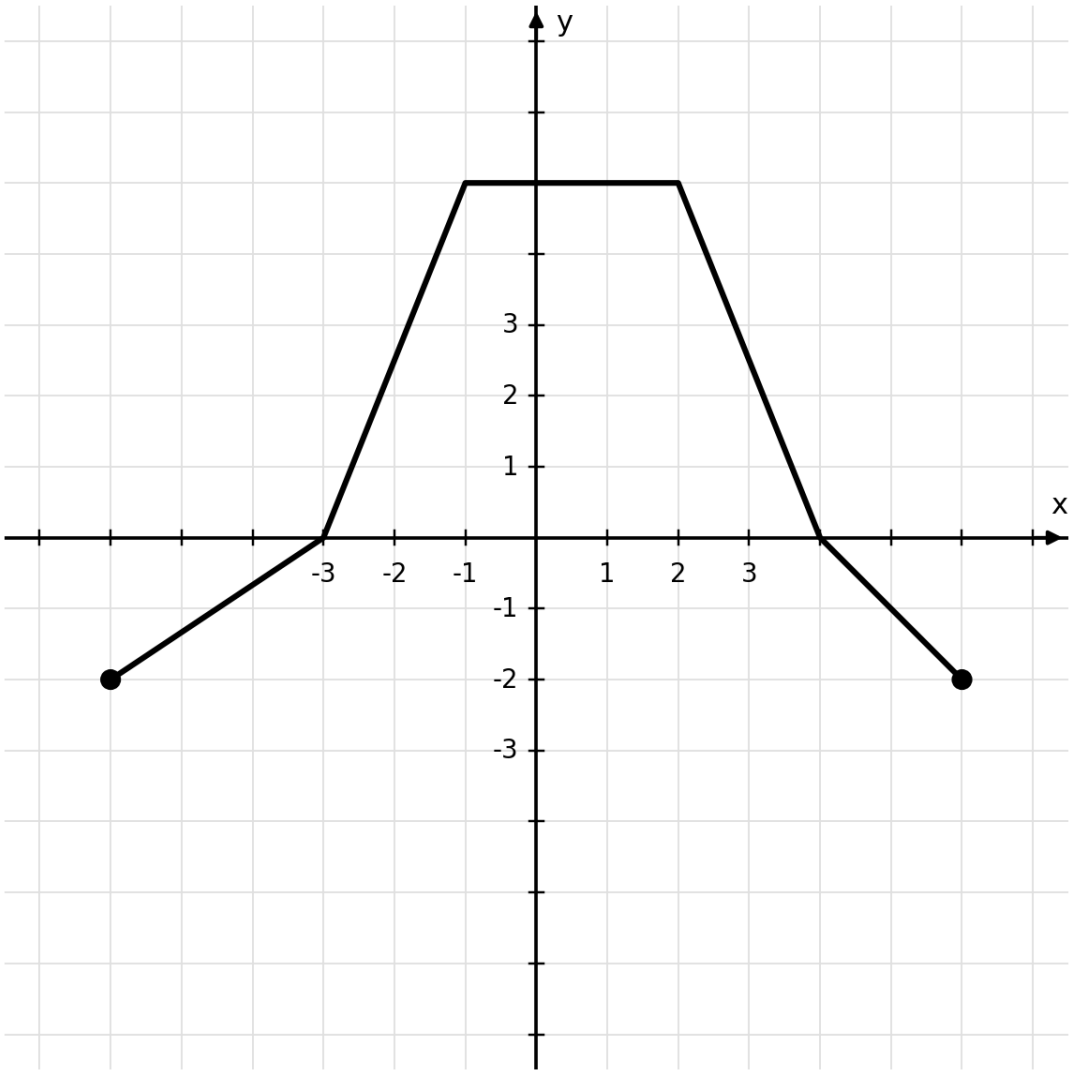
y-intercept: $(0, 1)$

Absolute maximum value and where it occurs: none

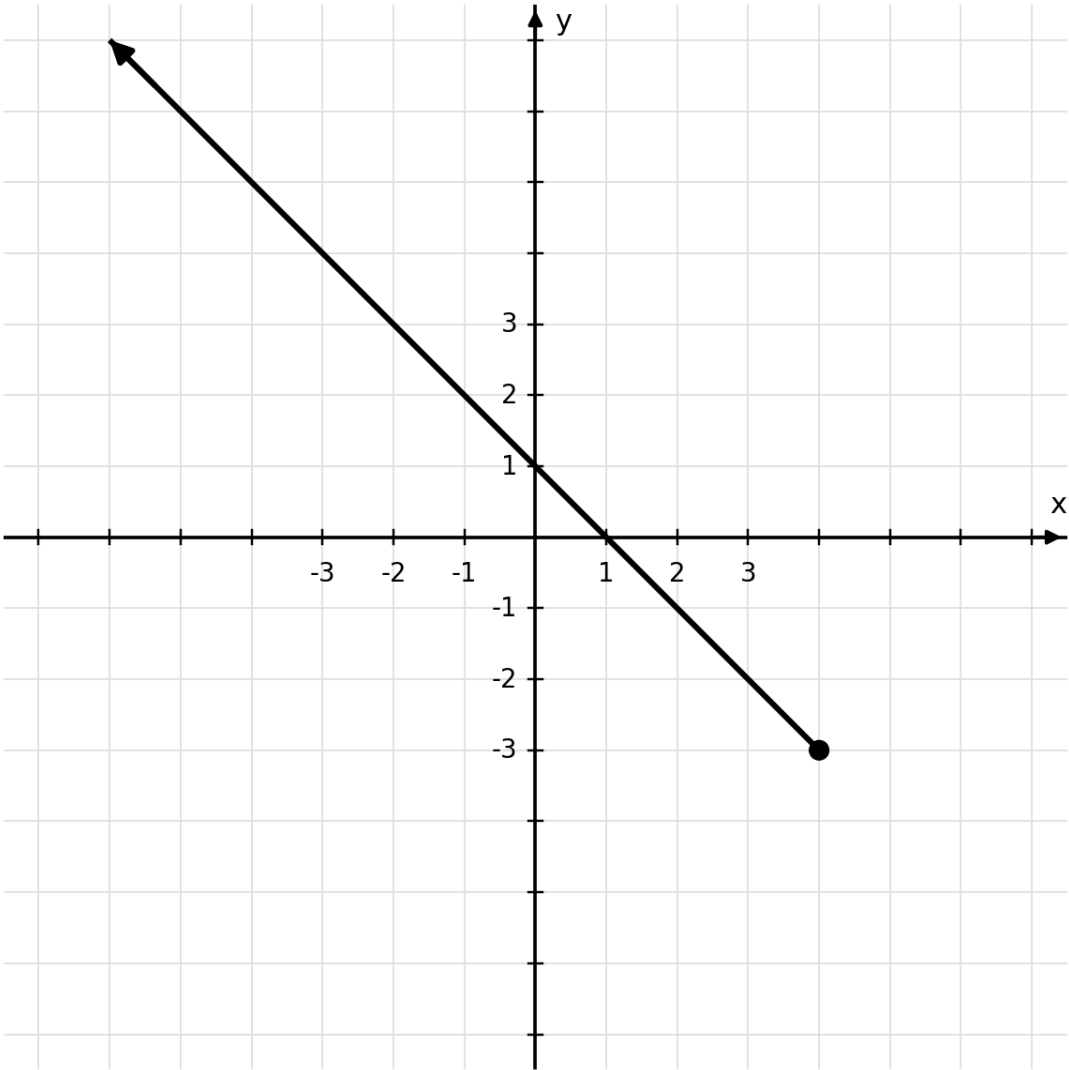
Absolute minimum value and where it occurs: 0; occurs at $x = -1$

3. One possible graph for each part is shown.

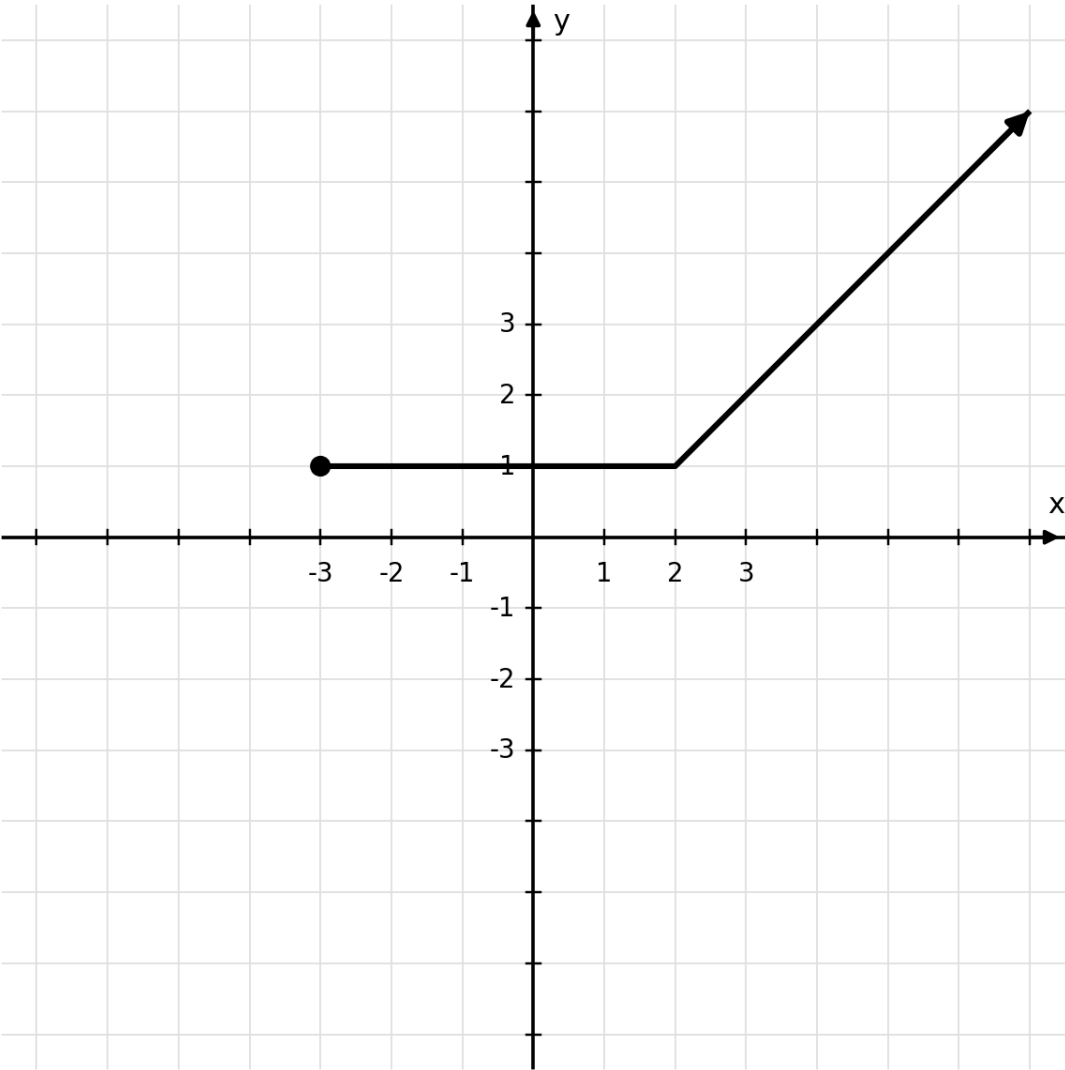
a.



b.



c.



d.

